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**Folder ID:** 1759722

**Series:** Central files

**Dates:** 02/12/1976 – 12/21/1977

**Fonds:** Records of the Consultative Group on International Agricultural Research (CGIAR)

**ISAD Reference Code:** WB IBRD/IDA CGIAR-4177S

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F-2

TAC Meetings

1975/77

Vol. II

**DECLASSIFIED**

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Consultative Group on International Agricultural Research [CGIAR] - F-2 - Technical  
Advisory Committee [TAC] Meetings - 1975 / 1977 Correspondence - Volume 2

CLOSE - OUT SHEET

This file is closed as of Dec 31, 1977.

For further correspondence, please see vol I 1978/80.

RECORDS MANAGEMENT SECTION

F-2

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
TECHNICAL ADVISORY COMMITTEE

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Via delle Terme di Caracalla, 00100 Rome, Italy  
Cables: FOODAGRI ROME - Telex: 61181 FOODAGRI  
Telephone: 5797

PR 3/10.18

21 December 1977

TO: Members of the Technical Advisory Committee  
Members of the Consultative Group on International  
Agricultural Research

FROM: The Executive Secretary, TAC



SUBJECT: Eighteenth Meeting of the Technical Advisory Committee

1. The Eighteenth Meeting of the TAC will be held in the Sudan Room (B327) at FAO Headquarters, Rome, from 14-20 February, 1977. The meeting will open at 0930 hours on 14 February. The provisional agenda and timetable for the meeting ... are attached hereto.
2. Newly appointed members of the Committee are invited to attend a briefing session to be held at 0830 hours on Tuesday, 14 February, in the Sudan Room (B327).
3. Hotel accommodation for members of TAC is being arranged by the Secretariat at the Hotel Victoria, Via Campania 41. Therefore, members who do not wish to stay at this Hotel should inform the Secretariat as soon as possible. In view of the need to make early reservations for hotel accommodation, observers wishing to attend are asked to notify the Secretariat of their requirements as soon as possible.
4. For the information of TAC members, air tickets will be issued pre-paid in the usual way and unless prior information is received regarding specific routings required they will be by the most direct route.
5. Members of the Consultative Group are reminded that they are free to appoint a single observer each to attend open sessions of the TAC.
6. Two major items of the Agenda, to be considered in closed session, are the draft reports of the Farming Systems "Stripe Review" Team and the Quinquennial Review Mission to IITA.
7. The Committee will also discuss inter alia, in open session, a working paper on the Quinquennial Review Process and progress reports on preparations for forthcoming reviews of WARDA and ICRISAT; the question of Associate Status in the CGIAR; proposals for elaboration and updating of the TAC/CGIAR position on "Priorities for International Support to Agricultural Research" and training at the International Agricultural Research Centres.

W/LO726

- ... 8. The following supporting documentation is sent herewith:
- Agenda Item 1. Annotated Agenda (DDC/TAC:IAR/77/28)
  - Agenda Item 2. Draft Report of the 17th Meeting of TAC/CGIAR (DDD/TAC:IAR/77/27)
  - Agenda Item 6. Note by the TAC Secretariat on the Quinquennial Review Process (DDD/TAC:IAR/77/29)

Further documentation will follow in due course and Progress Reports for Item 6,ii/iii will be distributed at the Meeting.

9. The Secretariat will be pleased to answer any enquiries which members or observers may wish to submit.

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
TECHNICAL ADVISORY COMMITTEE

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Via delle Terme di Caracalla, 00100 Rome, Italy  
Cables: FOODAGRI ROME - Telex: 61181 FOODAGRI  
Telephone: 5797

DDD/TAC:IAR/77/28

ANNOTATED PROVISIONAL AGENDA

Item 1     Opening and Adoption of the Agenda

Item 2     Adoption of the Report of the 17th Meeting

Item 3     Report on the last two meetings of the CGIAR

The Chairman of TAC will report verbally on the 13th CGIAR Meeting held on 14-16 September in Washington, D.C. and the 14th Meeting held on 16-17 November in Paris.

Item 4     Farming Systems Research Stripe Review

The draft report of the Farming Systems Research Stripe Review Team, based on visits to CIAT, IITA, ICRISAT, IRRI and Senegal during 1977, is currently under discussion by the Team in Washington. It will be discussed by the Committee prior to the holding of the Farming Systems Research Workshop in the first half of 1978. Proposals for this Workshop are also under discussion by the Team and will be presented to TAC for finalization.

Item 5     IITA Quinquennial Review Report

The Committee will have a preliminary discussion of an edited draft of the IITA Quinquennial Review Report, on the basis of which and of comments received from team members and the Institute, the Chairman and Secretary of the Team will prepare a finalized version of the report for discussion and formal comment at the next meeting of TAC.

Item 6     The Review Process and Progress Reports

i)            The Secretariat has prepared a note on the Quinquennial Review Process, based on experience to date in the conduct of five centre reviews and taking into consideration the comments of the CGIAR Review Committee and the 14th Meeting of the CGIAR which requested TAC to make recommendations for the future conduct of reviews. The note contains a tentative revision of the terms of reference and suggested guidelines for the conduct of future quinquennial reviews. The Committee should formulate firm proposals and recommendations for submission to the Consultative Group.

ii)iii)      Progress Reports are to be submitted on the status of preparations (schedules, proposed team membership, etc.) for the reviews of WARDA and ICRISAT, both planned provisionally for September, 1978. The Committee should decide on the final composition of the teams and the terms of reference for these reviews.

iv)           Preparations for future quinquennial reviews will be discussed by the Committee, including that of IBPGR, tentatively scheduled for early 1979 and for which specific terms of reference will be drafted.

Item 7 Associate Status in the CGIAR

The 14th CGIAR Meeting had discussed a Secretariat paper setting out the advantages and disadvantages of a formal "associate" status for institutions whose work was of considerable importance to, but which were not individually funded by, the CGIAR system. The CGIAR Secretariat paper will be sent under separate cover and the relevant extracts of the proceedings of the CGIAR meeting will be distributed when available. The Committee is requested to advise CGIAR on alternative policies and criteria regarding associate status.

Item 8 The Task Force on International Assistance for National Agricultural Research. Report on Activities.

The Chairman, the Executive Secretary and other TAC members who might attend the meeting of the Task Force in mid-January 1978, will report to the Committee on the status of the Task Force activities.

Item 9 Proposals for an Elaboration of TAC/CGIAR Priorities for International Support to Agricultural Research

In response to the expressed wish of the CGIAR for an examination of the question of resource allocation, arising from discussion of the 1977 Integrative Report, the TAC Secretariat was requested to initiate work on a document to aid discussion of the revision and elaboration of the TAC "Priorities Paper". The Secretariat has prepared an outline of such a document, in which various criteria and methodologies are examined, which could help to provide a basis for the re-examination of priority allocation in international research. The Committee's guidance is sought on the further elaboration of the document.

Item 10 Training at the International Agricultural Research Centres

Having consistently supported the training role of the IARCs, particularly in relation to the strengthening of national research, TAC agreed that it should now follow up the CGIAR-sponsored forum on training with either a "stripe" analysis of training at the IARCs or with a policy paper. A working paper, setting out some proposals which take into account recent discussions and TAC Quinquennial Review Teams' comments on training, has been prepared to assist members in formulating general guidelines for the future activities of IARCs in this field for consideration by the CGIAR.

Item 11 Basic Research at, and on behalf of, the IARCs.

Following discussion of the 1977 Integrative Report, the CGIAR expressed a need for guidance on the best approach to the handling of basic research at the IARCs. In response to this request the CGIAR Secretariat is considering the matter further and will report progress at the meeting.

Item 12 Other business

- i) Vegetables. The Committee may wish to discuss further the possible approaches to tropical vegetable research prior to the next meeting of its Subcommittee. Arrangements for this meeting should also be finalized (e.g., agenda, time and place).
- ii) Topics for other "Stripe" Reviews. Training has already been suggested as a possible topic for an across centre "stripe" review. Other topics of common interest to the centres (e.g., post-harvest technology, crop-protection, quarantine) might also warrant stripe reviews. Additional proposals are invited.

F-2

DDD/TAC:IAR/77/26

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

TECHNICAL ADVISORY COMMITTEE

17th MEETING, WASHINGTON, D.C. -- 9-10 SEPTEMBER, 1977

C A R I S D I R E C T O R I E S

TAC SECRETARIAT

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Rome, 1977



The indexes could appear disproportionate as regards the importance of the entries and of the items. This fact is due to the small number of institutions, research workers and programmes concerned by the sample (two countries only, Cyprus and Sudan, representing only 1% of Institutions, 1.3% of Research workers and 2.5% of Research programmes).

The proportion between the items and entries will be different when data concerning all countries will be considered, the part of the items being increased by nearly 95%.

In the description of Research workers, the first line includes Family name, First name, Birth date, Nationality.

# CARIS DIRECTORIES

## SAMPLE PAGES

(Cyprus & Sudan only)

Description of Research Institutions.

Alphabetical listing of Research Institutions.

Index of Institutions by Fields of Science.

Index of Institutions by Objects.

Description of Research Workers..

Index of Research Workers by Fields of Science.

Index of Research Workers by Objects.

Descriptions of Research Programmes.

Index of Programmes by Objects.

Index of Programmes by Activities.

CODES USED IN THE SAMPLE PAGES OF THE DIRECTORIES

Climates

6000	Mediterranean
6100	Subtropical Mediterranean
6130	Hot and Dry Subtropical Mediterranean
6131	- id - average daily minimum of the coldest month between 10° & 21°

Languages (ISO codes)

EN	English
GR	Greek
TR	Turkish
AR	Arabic
BG	Bulgarian

Countries (ISO codes)

CY	Cyprus
SD	Sudan

## CYPRUS (CY)

There is only one institution in Cyprus, namely the Agricultural Research Institute, completely devoted to research in agriculture. It is organized in the following six Sections: Agronomy, Horticulture, Soils and Water Use, Plant Protection, Animal Production and Agricultural Economics. The Institute is a Department of the Ministry of Agriculture and Natural Resources and its funding depends entirely on the Government budget. Limited research in agriculture is also carried out by certain of the other Departments of the Ministry, namely the Department of Agriculture (Extension Service), the Department of Fisheries, the Department of Forests and the Meteorological Service.

### CY.100. – MINISTRY OF AGRICULTURE AND NATURAL RESOURCES

Nicosia

Directly dependent Res. Inst.: (CY.110.) – (CY.120.) – (CY.130.) – (CY.340.) – (CY.150.)

### CY.110. – METEOROLOGICAL SERVICE

Nicosia – Telegr: METMOR NICOSIA  
Tel: 40-2377

Long: E.033.21 – Lat: N.35.09 – Alt: 160 m

Climate: 6131

Supervisory body: Ministry of Agriculture and Natural Resources (CY.100.)

Languages: Official: GR – Second: EN

Specialized equipment: Recording instruments for temperature, humidity, precipitation and wind velocity

Publications: Annual report – Technical reports

Background: The Meteorological Service of the Min. of Agric. and Nat. Resources of the Republic of Cyprus is the National Meteorological Service and until now one of its major fields of activity is agricultural meteorology

Gen. fields of activity: Particular attention is being given to studies on local climates, microclimatic characteristics and hydrometeorology

### CY.120. – FISHERIES DEPARTMENT/MINISTRY OF AGRICULTURE AND NATURAL RESOURCES

3-5 Tagmatarchou Poulou Str. – Nicosia  
Tel: 40-3279

Long: E.033.21 – Lat: N. 35.09 – Alt: 160 m

Climate: 6131

Supervisory body: Ministry of Agriculture and Natural Resources (CY.100.)

Staff: 10 scientists – 18 technicians

Languages: Official: EN – Second: GR

Experimental fields: 1,5 Ha

Specialized equipment: Research vessel (16 m steel-stern trawler) - Underwater research equipment (DPVs, cameras, strobes, etc.) – Echinoderm and Mollusc collections

Library and documentation: 2000 volumes – 20 current journals

Publications: Annual report - Technical reports

Background: The Fisheries Department was founded in 1964 to control, promote and develop the marine and inland fishing industry of the country

Gen. fields of activity: Marine Fisheries – Aquaculture – Oceanographic research – Pollution monitoring and prevention – Marine Biological Research – Fisheries Regulation

Financial support: C&103,000

Directly dependent Res. Inst: (CY. 121.)

### CY.121. – EXPERIMENTAL TROUT CULTURE STATION (OUT-STATION)

Fisheries Department – Nicosia  
Tel: 05715344

Long: E.032.50 – Lat: N. 34.58 – Alt: 575 m

Climate: 6131

Supervisory body: Ministry of Agriculture and Natural Resources (CY.100.)

Superior Inst: Fisheries Department (CY.120)

Staff: 2 technicians

Languages: Official: EN – Second: GR, TR

Experimental fields: Trout culture: 0.3 Ha

### CY.130. – DEPARTMENT OF FORESTS/MINISTRY OF AGRICULTURE AND NATURAL RESOURCES

Nicosia – Telegr: FORESTS CYPRUS  
Tel: 40-2266

Long: E.033.21 – Lat: N. 35.09 – Alt: 160 m

Climate: 6131

Supervisory body: Ministry of Agriculture and Natural Resources (CY.100)

Staff: 1 scientist – 2 technicians

Languages: Official: EN – Second: GR

Experimental fields: Man-made forest – Natural forest – Nurseries: 65 Ha

Specialized equipment: Vitascope – Microtome machine

Library and documentation: 800 volumes – 20 journals

Training facilities: Forestry

AGRICULTURAL RESEARCH INSTITUTE.	CY.150.	EXPERIMENTAL TROUT CULTURE STATION (OUT-STATION).	CY.121.
DEPARTMENT OF AGRICULTURE (MINIST. OF AGRIC. AND NAT. RESOURCES).	CY.140.	METEOROLOGICAL SERVICE.	CY.110.
DEPARTMENT OF FORESTS (MINIST. OF AGRIC. AND NAT. RESOURCES).	CY.130.	MINISTRY OF AGRICULTURE AND NATURAL RESOURCES.	CY.100.
EXPERIMENTAL FARM, ATHALASSA (OUT-STATION).	CY.151.	SAITTAS STATION (OUT-STATION).	CY.153.

- |              |   |  |                   |              |   |  |                   |
|--------------|---|--|-------------------|--------------|---|--|-------------------|
| <b>C1400</b> | <b>MATHEMATICS</b>                                  |  |                   | <b>C3320</b> | <b>PLANT IMPROVEMENT – PLANT BREEDING</b>           |  |                   |
| C1471        | SOIL PHYSICS  |  |                   |              | Sugar cane ( <i>Saccharum officinarum</i> ) (A2250) |  | SD.111.           |
|              | Cotton plant ( <i>Gossypium . . .</i> ) (A2410)     |  | SD.112.           |              | Cotton plant ( <i>Gossypium . . .</i> ) (A2410)     |  | SD.112.           |
| C1472        | SOIL CHEMISTRY                                      |  |                   | C3322        | PLANT SELECTION                                     |  |                   |
|              | Sugar cane ( <i>Saccharum officinarum</i> ) (A2250) |  | SD.111.           |              | Barley ( <i>Hordeum</i> ) (A2110)                   |  | SD.113.           |
|              | Cotton plant ( <i>Gossypium . . .</i> ) (A2410)     |  | SD.112.           |              | Wheat ( <i>Triticum</i> ) (A2180)                   |  | SD.113.           |
|              |   |  |                   |              | Sugar cane ( <i>Saccharum officinarum</i> ) (A2250) |  | SD.113.           |
|              |   |  |                   |              | Fruit plants (A2500)                                |  | SD.113.           |
| <b>C2100</b> | <b>GENERAL BIOLOGY</b>                              |  |                   | C3333        | INTENSIVE ROTATION FARMING                          |  |                   |
|              | Water (A1200)                                       |  | CY.120.           |              | Cotton plant ( <i>Gossypium . . .</i> ) (A2410)     |  | SD.112.           |
|              | Water Biology (A1230)                               |  | CY.120.           |              |   |  |                   |
|              | In-shore fishing (B1730)                            |  | CY.120.           | <b>C3500</b> | <b>FORESTRY</b>                                     |  |                   |
|              | Coastal fishing (B1740)                             |  | CY.120.           |              | Hyphaene thebaica (Doom) (A3552)                    |  | SD.110a.          |
|              | High sea and deep sea fishing (B1750)               |  | CY.120.           |              | Bamboos (A3560)                                     |  | SD.110a.          |
| <b>C2400</b> | <b>ECOLOGY &amp; ETHOLOGY</b>                       |  |                   |              | Acacias and Faidherbia (A3641)                      |  | SD.110a.          |
| C2411        | ANIMAL MESOLOGY                                     |  |                   |              | Geraniales – complementary (A3689)                  |  | SD.110a.          |
|              | Noxious insects (A1571)                             |  | SD.112.           |              | Eucalyptus (A3740)                                  |  | SD.110a.          |
| C2421        | PLANT MESOLOGY                                      |  |                   |              | Permanent windbreaks – Shelterbelts (A5185)         |  | SD.110a.          |
|              | Sugar cane ( <i>Saccharum officinarum</i> ) (A2250) |  | SD.111.           | <b>C3700</b> | <b>PHYTOPATHOLOGY AND PLANT PROTECTION</b>          |  |                   |
| <b>C2600</b> | <b>SPECIAL ZOOLOGY</b>                              |  |                   |              | Sugar cane ( <i>Saccharum officinarum</i> ) (A2250) |  | SD.111.           |
| <b>C2630</b> | <b>ENTOMOLOGY</b>                                   |  |                   | C3715        | ENTOMOLOGY (PLANTS)                                 |  |                   |
|              | Noxious insects (A1571)                             |  | SD.112.           |              | Sugar cane ( <i>Saccharum officinarum</i> ) (A2250) |  | SD.113.           |
| <b>C3300</b> | <b>PLANT PRODUCTION</b>                             |  |                   |              | Groundnut ( <i>Arachis hypogea</i> ) (A2350)        |  | SD.113.           |
|              | Fruit plants (A2500)                                |  | SD.110.           |              | Cotton plant ( <i>Gossypium . . . . .</i> ) (A2410) |  | SD.112. – SD.113. |
|              | Vegetables (A2700)                                  |  | SD.110.           | C3764        | WEED CONTROL – MALHERBOLOGY                         |  |                   |
|              | Pastures, cover and feed plants (A2800)             |  | SD.180.           |              | Sugar cane ( <i>Saccharum officinarum</i> ) (A2250) |  | SD.111. – SD.113. |
|              | Ornamental plants (other than trees) (A3800)        |  | SD.110.           |              | Groundnut ( <i>Arachis hypogea</i> ) (A2350)        |  | SD.113.           |
| <b>C3310</b> | <b>CROP HUSBANDRY</b>                               |  |                   |              | Cotton plant ( <i>Gossypium . . .</i> ) (A2410)     |  | SD.113.           |
|              | Barley ( <i>Hordeum</i> ) (A2110)                   |  | SD.113.           | <b>C6300</b> | <b>JURIDICAL SCIENCES</b>                           |  |                   |
|              | Wheat ( <i>Triticum</i> ) (A2180)                   |  | SD.113.           | <b>C6320</b> | <b>LEGISLATION</b>                                  |  |                   |
|              | Sugar cane ( <i>Saccharum officinarum</i> ) (A2250) |  | SD.111. – SD.113. |              | Water (A1200)                                       |  | CY.120.           |
|              | Fruit plants (A2500)                                |  | SD.113.           |              | Water Biology (A1230)                               |  | CY.120.           |

<b>A1200</b>	<b>WATER</b>			<b>A2410</b>	<b>COTTON PLANT (GOSSYPIUM . . . . .)</b>		
	General biology (C2100)		CY.120.		Soil physics (C1471)		SD.112.
	Legislation (C6320)		CY.120.		Soil chemistry (C1472)		SD.112.
<b>A1230</b>	<b>WATER BIOLOGY</b>				Plant improvement – plant breeding (C3320)		SD.112.
	General biology (C2100)		CY.120.		Intensive rotation farming (C3333)		SD.112.
	Legislation (C6320)		CY.120.		Entomology (plants) (C3715)	SD.112. –	SD.113.
<b>A1500</b>	<b>INLAND LIFE FORMS</b>				Weed control – malherbology (C3764)		SD.113.
<b>A1571</b>	<b>NOXIOUS INSECTS</b>			<b>A2500</b>	<b>FRUIT PLANTS</b>		
	Animal mesology (C2411)		SD.112.		Plant production (C3300)		SD.110.
	Entomology (C2630)		SD.112.		Crop husbandry (C3310)		SD.113.
<b>A2100</b>	<b>CEREALS</b>				Plant selection (C3322)		SD.113.
<b>A2110</b>	<b>BARLEY (HORDEUM)</b>			<b>A2700</b>	<b>VEGETABLES</b>		
	Crop husbandry (C3310)		SD.113.		Plant production (C3300)		SD.110.
	Plant selection (C3322)		SD.113.	<b>A2800</b>	<b>PASTURES, COVER AND FEED PLANTS</b>		
<b>A2180</b>	<b>WHEAT (TRITICUM)</b>				Plant production (C3300)		SD.180.
	Crop husbandry (C3310)		SD.113.	<b>A3500</b>	<b>FOREST AND ORNAMENTAL TREES (A3600 – A3700)</b>		
	Plant selection (C3322)		SD.113.	<b>A3552</b>	<b>HYPHAENE THEBAICA (DOUM)</b>		
<b>A2200</b>	<b>STARCH AND SUGAR PLANTS</b>				Forestry (C3500)		SD.111.
<b>A2250</b>	<b>SUGAR CANE (SACCHARUM OFFICINARUM)</b>			<b>A3560</b>	<b>BAMBOOS</b>		
	Soil chemistry (C1472)		SD.111.		Forestry (C3500)		SD.110a.
	Plant mesology (C2421)		SD.111.	<b>A3641</b>	<b>ACACIAS AND FAIDHERBIA</b>		
	Crop husbandry (C3310)	SD.111. –	SD.113.		Forestry (C3500)		SD.110a.
	Plant improvement – plant breeding (C3320)		SD.111.	<b>A3689</b>	<b>GERANIALES – COMPLEMENTARY</b>		
	Plant selection (C3322)		SD.113.		Forestry (C3500)		SD.110a.
	Phytopathology and plant protection (C3700)		SD.111.	<b>A3740</b>	<b>EUCALYPTUS</b>		
	Entomology (plants) (C3715)		SD.113.		Forestry (C3500)		SD.110a.
	Weed control – malherbology (C3764)		SD.111. –	<b>A3800</b>	<b>ORNAMENTAL PLANTS (OTHER THAN TREES)</b>		
			SD.113.		Plant production (C3300)		SD.110.
<b>A2300</b>	<b>OIL PLANTS</b>			<b>A5100</b>	<b>FARM BUILDINGS AND OTHER INSTALLATIONS</b>		
<b>A2350</b>	<b>GROUNDNUT (ARACHIS HYPOGAEA)</b>						
	Entomology (plants) (C3715)		SD.113.				
	Weed control – malherbology (C3764)		SD.113.				
<b>A2400</b>	<b>FIBRE PLANTS</b>						

**ABD EL KAREEM Mohamed Ibrahim** - (1946.09.17) SD.

- 1 - AR, EN.
- 2 - AR, EN.
- 3 - AR, EN.
- 4 - B.Sc., Food Technology, Cairo University, 1968. M.Sc., Food Tech. (Process Engineering), Reading University, England, 1973.
- 5 - SD.160.
- 6 - Research Scientist.
- 7 - Food Research Centre, P.O. Box 213, Khartoum North SD. 160. - SD.
- 8 - Food Microbiology, Biochemistry and Quality Control. Food Engineering (Heat Processing, Drying, Freezing, Irradiation, Filtration, Centrifugation, Crystallization, Emuhification, etc. Food Dehydration, Packeging.

**ABDELRAHMAN Asim Ali** - (1938.07.04) SD.

- 1 - AR, EN.
- 2 - AR, EN.
- 3 - AR, EN.
- 4 - B.Sc., Agriculture, 1961. Ph. D. Entomology, 1966.
- 5 - SD.100.
- 7 - Agric. Research Corporation, Medani. SD. 110.
- 8 - Agricultural Entomology.

**ABUELGASIM El Hag Hassan** - (1945.01) SD.

- 1 - AR, EN.
- 2 - AR, EN.
- 3 - AR, EN.
- 4 - B.Sc. (Hons.) Agr. (Univ. of Khartoum) 1968. Post-Grad. Dip. (IARI, New Delhi) 1972. M.Sc., Agr. (University of Khartoum) 1974.
- 5 - SD.100.
- 6 - Plant Breeder, Plant Breeding Section.
- 7 - Gezira Research Station Agric. Research Cro. Wad Medani. SD. 110. - SD.
- 8 - Breeding and Improvement of Cereals (Pearl Millet & Sorghum).

**ABUSALIH Hassan Suliman** - (1928.08.11) SD.

- 1 - AR, EN.
- 2 - AR, EN.
- 3 - EN, AR.
- 4 - Dipl. Agric (Khartoum) - 1953. M.Sc. (Calif.) - 1956. Ph.D. (St. Andrews) - 1968.
- 5 - SD.100.
- 6 - Departy Director General.
- 7 - Gezira Research Station Wad Medani, Sudan. SD. 110.
- 8 - Plant Pathology with Special Emphasis on Virus Diseases.

**AHMED Ahmed Hashim Ahmed** - (1943.01.01) SD.

- 1 - AR, EN.
- 2 - AR, EN.
- 3 - AR, EN.
- 4 - B.Sc. (Agr.), University of Khartoum, 1967. Ph.D. University of London, 1973.

5 - SD.100.

6 - Plant Pathologist.

7 - Agricultural Research Corporation Wad Medani, Sudan. SD. 110.

8 - Plant Virology.

**AHMED Faisal Awad** - (1943.01.08) SD.

- 1 - EN, AR.
- 2 - EN, AR.
- 3 - EN, AR.
- 4 - B.V.Sc. University of Khartoum (1967) Faculty of Veterinary Science. M.Sc. University of Aberdeen (U.K.) (1973). Agricultural Chemistry and Biochemistry Dept. Animal Nutrition.
- 5 - SD.100.
- 6 - Animal Nutritionist. Head, Ghazala Gawazat Research Station.
- 7 - P.O. Box 2 Ed Daein. SD. 180. - SD.
- 8 - Veterinary Science. Animal Production. Animal Nutrition (Ruminants).

**ALI Naiem Abdalla** - (1946.01.01) SD.

- 1 - AR, EN.
- 2 - AR, EN.
- 3 - AR, EN.
- 4 - B.Sc. (Hons.) Agric. Khartoum 1969. Ph.D. (Bath, U.K.) 1976.
- 5 - SD.100.
- 6 - Plant Biochemist.
- 7 - Agric. Research Corp., Gezira Research Station, Wad Medani, Sudan. SD.110. - SD.
- 8 - Biochemical Studies in Economical Crops, mainly Carboh Ydralt Metabolism.

**ANASTASSIADES Georgios** - (1942.04.23) CY.

- 1 - GR, EN, BG.
- 2 - GR, EN, BG.
- 3 - GR, EN, BG.
- 4 - B.Sc. in Biology, Sofia State University Kliment Oehridski Bulgaria, 1968.
- 5 - CY.100.
- 6 - Assistant Fisheries Officer.
- 7 - Fisheries Department, Nicosia. CY.
- 8 - Fish Culture (Trout Culture).

**AZIZ Ibrahim H.** - (1938.01.27) CY.

- 4 - Diploma in Agriculture, Faculty of Agriculture, Sofia, Bulgaria, 1964. Certificate in Viticulture, Research Institute in Viticulture and Oenology, Pleven, Bulgaria, 1965. Ph.D. in Viticulture, Pleven, Bulgaria, 1972.
- 5 - CY.100.
- 6 - Assistant Agricultural Research Officer.
- 7 - Agricultural Research Institute, Nicosia. CY.
- 8 - Viticulture. Oenology.

**REFERENCES CODES**

- 1 - Languages Spoken      2 - Languages Written.      3 - Languages Read.      4 - Academic Qualification and Dates.      5 - Employer.  
6 - Title, Function.      7 - Working Place.      8 - Fields of Science.



- C1100 MATHEMATICS**
- C1160 STATISTICS**  
Man-made forest (A1458) Hussein, S.D.G.
- C1300 CHEMISTRY**  
Food and Feed components (A8800) Mgaboul, B.I.
- C1400 EARTH SCIENCES**
- C1431 BIOLOGICAL OCEANOGRAPHY**  
Marine fish (A1660) Livadas, R.J.  
Open sea (Oceanic region) (A1875) Economou, E.  
Benthic region (A1876) Hadjichristoforou, M.
- C1470 SOIL SCIENCE**  
Man-made forest (A1458) Hussein, S.D.G.  
Sugar cane (*Saccharum officinarum*) (A2250) Ibrahim, H.S.
- C1473 SOIL BIOLOGY**  
Soil-plant relationship – Fertility (A1150) Musa, M.M.
- C1474 SOIL FERTILITY**  
Soil-plant relationship – Fertility (A1150) Musa, M.M.
- C1479 SOIL SCIENCE – OTHER**  
Soil water (A1117) Krentos, V.D.
- C2100 GENERAL BIOLOGY**
- C2130 BIOCHEMISTRY**  
Fruit plants (A2500) Musa, S.K.  
Vegetables (A2700) Musa, S.K.
- C2172 ANIMAL TAXONOMY**  
Insects (A1556) Ahmed, M.A.
- C2183 PLANT GENETICS**  
Cereals (A2100) Hadjichristodoulou, A.  
Wheat (*Triticum*) (A2180) Khalifa, M.A.  
Pastures, cover and feed plants (A2800) Hadjichristodoulou, A.  
Medicinal plants of warm climates - other (A3449) Khalifa, M.A.
- C2200 ANIMAL PHYSIOLOGY**
- C2231 ANIMAL NUTRITION PHYSIOLOGY**  
Ruminants (A4100) Ahmed, F.A.  
Bovines (A4110) Economides, S.  
Sheep (A4140) Economides, S.  
Goats (A4150) Economides, S.
- C2300 PLANT PHYSIOLOGY**  
Water-plants relationships (A1270) El Rayah, A.H.  
Weeds (A1541) Beshir, M.M.  
Cereals (A2100) Lazim, M.F.  
Oil plants (A2300) Lazim, M.F.  
Groundnut (*Arachis hypogea*) (A2350) Ishag, H.M.  
Cotton plant (*Gossypium* . . .) (A2410) Ishag, H.M. – Saleem, M.B.  
Fruit plants (A2500) Musa, S.K.  
Vegetables (A2700) Musa, S.K.  
Tobacco (*Nicotiana tabacum*) (A3410) Kanani, M.M.  
Fruits and vegetables (A7300) Kokkalos, T.I.
- C2390 PLANT PHYSIOLOGY – OTHER**  
Fruits and vegetables (A7300) Vakis, N.J.
- C2400 ECOLOGY, POLLUTION**  
Benthic region (A1876) Demetropoulos, A.  
Hadjichristoforou, M.
- C2410 ANIMAL ECOLOGY**  
Insects (A1556) Orphanides, G.M.
- C2414 POPULATION DYNAMICS (ANIMALS)**  
Marine fish (A1660) Livadas, R.J.
- C2420 PLANT ECOLOGY**  
Weeds (A1541) Beshir, M.M.
- C2460 ENVIRONMENTAL POLLUTION**  
Exogenous, chemical origin (A8875) El Zorgani, G.A.B.
- C2700 SPECIAL BOTANY**
- C2710 MICROBIOLOGY (BOTANY)**  
Food (in general) (A8900) Abdelgadir, A.M.  
Abdelmoneim, I.M. – El Faki, H.A.

- A1100 SOILS**
- A1117 SOIL WATER  
Soil science – other (C1479) Krentos, V.D.
- A1150 SOIL-PLANT RELATIONSHIP – FERTILITY**  
Soil biology (C1473) Musa, M.M.  
Soil fertility (C1474) Musa, M.M.  
**SOIL-PLANT RELATIONSHIP – FERTILITY**  
Farbrother, H.G.
- A1200 WATER**
- A1270 WATER-PLANTS RELATIONSHIPS**  
Plant physiology (C2300) El Rayah, A.H.  
**WATER-PLANTS RELATIONSHIPS**  
Farbrother, H.G.
- A1300 AIR AND CLIMATE**
- A1322 EVAPORATION AND EVAPOTRANSPIRATION  
Agrometeorology (C3120) Adam, E.S.
- A1336 RADIATION BALANCE  
Agrometeorology (C3120) Adam, E.S.
- A1400 LIFE FORMS IN GENERAL**
- A1458 MAN-MADE FOREST  
Statistics (C1160) Hussein, S.D.G.  
Soil science (C1470) Hussein, S.D.G.
- A1500 INLAND LIFE FORMS**
- A1541 WEEDS  
Plant physiology (C2300) Beshir, M.M.  
Plant ecology (C2420) Beshir, M.M.  
Chemical control (C3753)  
Hamdoon, A.M. – Beshir, M.M.
- A1556 INSECTS  
Animal taxonomy (C2172) Ahmed, M.A.  
Animal ecology (C2410) Orphanides, G.M.
- A1600 MARINE LIFE FORMS**
- A1660 MARINE FISH**  
Biological oceanography (C1431) Livadas, R.J.  
Population dynamics (animals (C2414)  
Livadas, R.J.
- A1800 TOPOGRAPHICAL AND GEOGRAPHICAL AREAS**
- A1875 OPEN SEA (OCEANIC REGION)  
Biological oceanography (C1431) Economou, E.
- A1876 BENTHIC REGION  
Biological oceanography (C1431) Hadjichristoforou, M.  
Ecology, Pollution (C2400) Demetropoulos, A. – Hadjichristoforou, M.
- A2100 CEREALS**  
Plant genetics (C2183) Hadjichristodoulou, A.  
Plant physiology (C2300) Lazim, M.H.L.  
Agricultural sciences (C3000) Hadjichristodoulou, A.  
Plant production (C3300) El Rayah, A.H.  
Plant improvement – plant breeding (C3320)  
Della, A.  
Entomology (plants) (C3715) Elamin, E.M.
- A2110 BARLEY (HORDEUM)**  
Plant improvement – plant breeding (C3320)  
Mchamed, S.M.  
Creation and use of resistant species or varieties  
(C3757) Mchamed, S.M.
- A2131 PEARL MILLET (PENNISETUM TYPHOIDEUM)  
Plant improvement – plant breeding (C3320)  
Abuelgasim, H.H. – Mahmoud, M.A.
- A2148  
Irrigation techniques and water control (C3236)  
Stylianou, Y.
- A2150 RICE (ORYZA SATIVA)**  
Plant production (C3300) Ghobrial, G.I.
- A2160 TRITICALE**  
Plant improvement – plant breeding (C3320)  
Mchamed, S.M.  
Creation and use of resistant species or varieties  
(C3757) Mchamed, S.M.

## CYPRUS (CY)

### FISHERIES DEPARTMENT (MINIST. OF AGRI. AND NAT. RESOURCES (CY.120.))

- CY.120.AA.** – Development and Management of Marine and Inland Fisheries.  
 – *Developpement et aménagement des pêches maritimes et continentales.*  
 – *Desarrollo y manejo de la pesca marítima y continental.*

#### Projects

- Stock Assessment and Management of Demersal Fishes. (Livadas, R.J.) (CY.120.0001.)
- Stock Assessment and Management of Pelagic Fish. (Economou, E.) (CY.120.0002.)
- Physical and Chemical Oceanographic Research. (Demetropoulos, A.) (CY.120.0003.)
- Pollution Monitoring. (Demetropoulos, A.) (CY.120.0003.)
- Inland Water Management. (Stephanou, D.) (CY.120.0005.)
- Trout and Salmon culture (Fresh Waters). (Stephanou, D.) (CY.120.0006.)
- Oyster Culture. (Stephanou, D.) (CY.120.0007.)
- Grey Mullet Culture (Brackish and Fresh Waters). (Stephanou, D.) (CY.120.0008.)
- Benthos Ecology Study. (Demetropoulos, A.) (CY.120.0009.)
- Construction and Study of Artificial Reefs. (Demetropoulos, A.) (CY.120.0010.)
- Effects of Pollution on Benthos. (Demetropoulos, A.) (CY.120.0011.)
- Sponge Cultivation. (Demetropoulos, A.) (CY.120.0012.)

### DEPARTMENT OF FORESTS (MINIST. OF AGRIC. AND NAT. RESOURCES) (CY.130.)

- CY.130.AA.** – Forest Research.  
 – *Recherche Forestiere.*  
 – *Investigación Forestal.*

#### Description

- Species trials, Forest Genetics and Reforestation Techniques.

#### Projects

- Species Trials (*Pinus, Eucalyptus*) (Leontiades, L.) (CY.130.0001.)
- Forest Tree Breeding (Inter or Intra Specific Hybridization) (*Pinus Brutia, P. Halepensis, P. Canariensis, P. Maritima, P. Nigra*). (Leontiades, L.) (CY.130.0002.)
- Asexual Propagation (Grafting) and Seed Orchards (*P. Brutia, Cupressus Sempervirens, Platanus Orientalis, Alnus Orientalis, Robinia Pseudacacia*) (Leontiades, L.) (CY.130.0003.)
- Fertilization Trials (*P. Brutia*) (Leontiades, L.) (CY.130.0004.)
- Progeny and Provenance Trials (*P. Brutia*). (Leontiades, L.) (CY.130.0005.)
- Seed Testing and Seed Viability. (CY.130.0006.)
- Reforestation Techniques (Burnt Areas). (Leontiades, L.) (CY.130.0007.)
- Sowing and Planting with Various Soil Treatments. (CY.130.0008.)
- Optimum Spacing for Planting (*P. Brutia*). (Leontiades, L.) (CY.130.0009.)

### DEPARTMENT OF AGRICULTURE (MINIST. OF AGRI. AND. NAT. RESOURCES) (CY.140.)

- CY.140.AA.** – Improvement of Animal Production.  
 – *Amélioration de la production animale.*  
 – *Mejora de la producción ganadera.*

#### Projects

- Pig Nutrition and Breeding. (Pratsos, K.A.) (CY.140.0001.)
- Nucleus Breeding Units for Sheep and Goats. (Constantinou, A.) (CY.140.0002.)

- CY.140.AB.** – Biology and Control of Pests and Diseases of Crops.  
 – *Biologie et contrôle des ennemis et maladie cultures.*  
 – *Biología y control de plagas y enfermedades agrícolas.*

#### Projects

- Biology, Behaviour and Control of Potato Tuber Moth (*Gnori Moschema Operculella*). (Krambias, A.) (CY.140.0003.)
- Attraction of potato Tuber Moth by Pheromones. (Krambias, A.) (CY.140.0004.)
- Control of the Citrus Nematode (*Tylenchulus Semipenetrans*). (Panayi, C.) (CY.140.0005.)
- Control of the Potato Cyst Nematode. (Panayi, C.) (CY.140.0006.)
- Testing of Potato Varieties Resistant of the Cyst Nematode. (Panayi, C.) (CY.140.0007.)
- Identification and Control of Cyprus Fungi. (Panayi, C.) (CY.140.0008.)

### AGRICULTURAL RESEARCH INSTITUTE (CY.150)

- CY.150.AC.** – Biology and control of noxious insects.  
 – *Biologie et contrôle des insectes nuisibles.*  
 – *Biología y control de insectos dañinos.*

#### Projects

- Chemical control of insects attacking stored grain. (CY.150.0018.)
- Chemical control of aphids on okra. (Philis, J.) (CY.150.0019.)
- Control of the tobacco white fly (vector of yellow leafcurl virus of tomato). (Philis, J.) (CY.150.0020.)
- Biology of the carob midge. (Philis, J.) (CY.150.0022.)
- Biological control of the carob midge. (Philis, J.) (CY.150.0022.)
- Control of cereal leaf miner (*Syringopais temperatella*). (CY.150.0023.)
- Control of the grape berry moth. (Philis, J.) (CY.150.0024.)
- Control of *Spodoptera littoralis*. (Philis, J.) (CY.150.0025.)

- CY.150.AD.** – Post-harvest handling of fruits and vegetables.  
 – *Manutention des fruits et legumes apres recolte.*  
 – *Manipulación de frutas y verduras después de la cosecha*

#### Projects

- Degreening of citrus fruits (Grapefruit, lemon). (CY.150.0026.)
- Control of post-harvest decay of citrus fruits. (Azuz, H.) (CY.150.0027.)

**A2700 VEGETABLES****A2772 TOMATOES (LYCOPERSICUM ESCULENTUM)****Sowing, planting and setting up (B2120)**

Genetical and cultural improvement of tomato  
for (1) processing & (2) fresh market purposes  
SD.113.AB

**Sowing (B2122)**

See SD.113.AB

**Spacing and arrangements (B2125)**

See SD.113.AB

**Irrigation (in general) and Water-control (B2141)**

Improvement of Vegetable Production  
CY.150.AE

**Constitution of collection (B2713)**

Genetical and cultural improvement of tomato  
for (1) processing & (2) fresh market purposes  
SD.113.AB

**Choice and propagation of species, varieties or clones (B2720)**

Improvement of Vegetable Production  
CY.150.AE

Control of Nematodes CY.150.AM

Genetical and cultural improvement of tomato  
for (1) processing & (2) fresh market purposes  
SD.113.AB

See SD.160.AA

**Cultural control (B3142)**

Plant protection research programme SD.110.AW

**Chemical control (B3143)**

Control of Nematodes CY.150.AM

Investigations of virus diseases of groundnuts and  
vegetables SD.110.AS

Plant protection research programme SD.110.AW

**Creation and use of resistant species or varieties (B3147)**

Control of Nematodes CY.150.AM

Plant protection research programme SD.110.AW

Genetical and cultural improvement of tomato  
for (1) processing & (2) fresh market purposes  
SD.113.AB

**Plant protection against viruses (B3230)**

Studies on virus diseases of tomato, broad bean  
and soybean SD.110.AB

Investigations of virus diseases of groundnuts and  
vegetables SD.110.AS

Plant protection research programme SD.110.AW

Genetical and cultural improvement of tomato  
for (1) processing & (2) fresh market purposes  
SD.113.AB

**Plant protection against nematodes and other worms (B3280)**

Control of Nematodes CY.150.AM

**Products' protection against other abiotic natural factors (B3620)**

Development of Fruits and Vegetable canning  
industry in Sudan (1) SD.160.AA

**Storage (B4300)**

Development of Fruits and Vegetable canning  
industry in Sudan (1) SD.160.AA

**Processing of fruits and vegetables (B5300)**

Development of Fruits and Vegetable canning  
industry in Sudan (1) SD.160.AA

**Desiccation (B6610)**

Food dehydration (1) SD.160.AE

**Determination of technological qualities of agricultural products (B6980)**

See SD.160.AA

**Plant parasitology (B8510)**

Studies on virus diseases of tomato, broad bean  
and soybean SD.110.AB

**Epidemiology (plants) (B8520)**

Studies on virus diseases of tomato, broad bean  
and soybean SD.110.AB

**Virology (B8710)**

Studies on virus diseases of tomato, broad bean  
and soybean SD.110.AB

**Survey of agricultural production costs (B9732)**

See SD.160.AT

**A2773 EGG PLANTS (SOLANUM MELONGENA)****Irrigation (in general) and Water-control (B2141)**

Improvement of Vegetable Production  
CY.150.AE

**Choice and propagation of species, varieties or clones (B2720)**

Improvement of Vegetable Production  
CY.150.AE

**A2774 OKRA, GOMBO (HIBISCUS ESCULENTUS)****Choice and propagation of species, varieties or clones (B2720)**

Investigations of virus diseases of groundnuts and  
vegetables SD.110.AS

**Chemical control (B3143)**

See CY.150.AC

**Creation and use of resistant species or varieties (B3147)**

Investigations of virus diseases of groundnuts and  
vegetables SD.110.AS

**Plant protection against fungi (B3250)**

Biological study of plant pathogens and their  
control SD.110.AU

**Plant protection against insects and other arthropods (B3290)**

See CY.150.AC

- B3100 GENERAL INVESTIGATIONS AND CONTROL METHODS**
- B3110 STUDY OF IMMUNITY AND OF PEST AND DISEASE RESISTANCE**
- Noxious fungi (A1542)**  
Microbiology and industrial fermentation of food (II) SD.160.AH
- Noxious insects (A1571)**  
Bionomics and control of the stem borer *Sesamia cretica* Led. in sugar cane. SD.113.AC.
- Wheat (*Triticum*) (A2180)**  
See SD.110.BC
- Potatoes (*Solanum tuberosum*) (A2210)**  
Biology and control of Pests and Diseases of crops CY.140.AB
- Sugar cane (*Saccharum officinarum*) (A2250)**  
Bionomics and control of the stem borer *Sesamia cretica* Led. in sugar cane. SD.113.AC
- Cotton plant (*Gossypium*. . .) (A2410)**  
See SD.102.AA – SD.110.AU
- Onions (*Allium cepa*) (A2752)**  
Microbiology and industrial fermentation of food (II) SD.160.AH
- Attractants (A6730)**  
Biology and Control of Pests and Diseases of Crops CY.140.AB
- B3120 STUDY OF THE RESISTANCE OF PARASITES, PATHOGENS AND VECTORS**
- Microorganisms other than fungi (A1510)**  
Microbiology and industrial fermentation of food (II) SD.160.AH
- Noxious insects (A1571)**  
The biology and control of the cotton white fly, *Bemisia tabaci* Gen. SD.110.AN
- B3130 IDENTIFICATION OF PATHOGENS**
- Protozoans (A1514)**  
See SD.250.AB
- Barley (*Hordeum*) (A2110)**  
See SD.150.AB
- Sweet banana trees (*Musa paradisiaca sapientium* and *M. nana*) (A2543)**  
See SD.160.AK
- Fresh vegetables (A7310)**  
Aspects of food Microbiology (II) SD.160.AK
- Fresh fruits (A7330)**  
Aspects of Food Microbiology (II) SD.160.AK
- B3140 PESTS AND DISEASES CONTROL METHODS**
- B3142 CULTURAL CONTROL**
- Virus and viroids (A1512)**  
Plant protection research programme SD.110.AW
- Weeds (A1541)**  
See SD.110.AK
- Noxious insects (A1571)**  
Cotton Physiology SD.110.AG
- Sesame (*Sesamum indicum*) (A2393)**  
Studies in, and control of, plant diseases SD.110.AT
- Cotton plant (*Gossypium*. . .) (A2410)**  
Cotton Physiology SD.110.AG  
Studies in, and control of, plant diseases SD.110.AT
- Vegetables (A2700)**  
Studies in, and control of, plant diseases SD.110.AT
- Tomatoes (*Lycopersicum esculentum*) (A2772)**  
See SD.110.AW
- B3143 CHEMICAL CONTROL**
- Virus and viroids (A1512)**  
Plant protection research programme SD.110.AW
- Weeds (A1541)**  
Improvement of Citrus Production CY.150.AH  
See SD.110.AK  
Chemical weed control in cotton, groundnuts, sorghum, wheat and kenaf SD.110.AV
- Noxious fungi (A1542)**  
Studies in, and control of, plant diseases SD.110.AT  
See SD.110.AU
- Worms (memathemintnes) (A1552)**  
See SD.110.AW
- Noxious insects (A1571)**  
See CY.150.AC  
The biology and control of the cotton whitefly, *Bemisia tabaci* Gen. SD.110.AN  
Bionomics and control of the stem borer *Sesamia cretica* Led. in sugar cane. SD.113.AC
- Cereals (A2100)**  
Biology and Control of Pests and Diseases of Crops CY.140.AB  
See CY.150.AC
- Barley (*Hordeum*) (A2110)**  
Improvement of cereal (wheat, barley) production through better agronomic practices CY.150.AJ
- Rice (*Oryza sativa*) (A2150)**  
Investigations of virus diseases of groundnuts and vegetables. SD.110.AS

Class of Service: \_\_\_\_\_ Date: 7 September, 1977

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PEREIRA

LONDON ENGLAND

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✓ F-2  
cc G-1

Mr. Michael L. Lejeune

July 8, 1977

A. Hayman *AM*

Attendance at 16th Meeting of TAC, CIAT May 30 - June 3, 1977.  
Back-to-Office Report.

1. Dr. Coulter and I attended the 16th meeting of TAC, held at CIAT from May 30 to June 3. In addition, we took advantage of the presence of Center Directors to review with them drafts of center commentaries, and to raise other matters of concern.

TAC Meeting

2. A full summary of proceedings is being prepared by the TAC Secretariat. The following notes, therefore, only cover points of particular interest to the CGIAR Secretariat.

3. The Agenda had originally listed most sessions as "Closed." Hence, only two observers, from USAID and IDRC Bogota, attended. The Chairman proposed that most meetings be regarded as "Open." Dr. Coulter and I attended all the sessions.

Review of Center Programs

4. In general, the TAC discussions did not raise any particular problems or issues, even for those centers which had recently had a Quinquennial Review. An exception was ICARDA, in which the problems of irrigation and water management stimulated rather more lively debate. The main points emerging from the discussion of the centers are available in the TAC Secretariat summaries.

CIP

5. The general impression of the TAC Review was favorable, but quarantine dangers were noted. TAC recommendations are now reflected in CIP's 1978 budget. Dr. Sawyer questioned the validity of some of the assumptions in the "Koffsky Paper" (bug this point was not further pursued). While professing himself pleased with the TAC Review, Dr. Sawyer rather pointedly remarked that CIP's "thrusts" had been reviewed at least twice by over 150 international scientists.

6. We mentioned some of the difficulties we had experienced with CIP's budget, and Dr. Sawyer outlined the steps CIP is taking to reorganize its accounting. Dr. Sawyer emphasized the importance for the application of CIP's work of seed technology and storage.

IRRI

7. Dr. Brady drew attention to the negative references to the Green Revolution in the recent Asian Development Bank report. The Chairman, and others, commended the proposed collaborative work with ICIPE. IRRI's tendency to move programs in and out of the core budget was noted.



IITA

8. Dr. Gamble reviewed IITA's progress over the past year. He noted the increase in outreach activities, due to greater awareness among national governments of IITA's potential contribution. There was also an increasing demand for consulting services from agencies such as USAID and the World Bank. It was proposed to post an IADS staff member at IITA to meet some of this demand. Dr. Gamble noted some of the logistical and staffing problems which IITA has faced.

ILCA

9. Dr. Pratt reviewed the current situation in Ethiopia, from which it became clear that ILCA staff and their families are facing considerable problems and dangers. The difficulty of ILCA's mandate was recognized.

ILRAD

10. Dr. Hopper raised a number of budget questions, mostly reflected in the Secretariat commentary. It was pointed out that successful disease control could lead to serious ecological damage if stock numbers increased rapidly in fragile environments. ILCA and ILRAD would jointly address this problem.

ICRISAT

11. Dr. Swindale noted a slight increase in the proposed 1978 budget due to inflation and the TAC Quinquennial Review, now scheduled for late September/early October 1978.

IBPGR

12. Mr. Demuth, in reviewing IBPGR's activities over the past year, noted the strengthening of management of the IS/GR program, following the resignation of Dr. Rogers. This program might be expanded to cover forestry in 1979. In discussing who should bear the cost of the IS/GR program, it was pointed out that charging the IARCs was still a cost to the system, which might be higher than if it was all funded through the IBPGR.

WARDA

13. There was wide recognition of the energy that Dr. Diouf had brought to WARDA. Budgets for the special research projects were very difficult to prepare, due to a larger number of donors, some of whom were quite unpredictable. The long-term future of WARDA was as yet somewhat obscure. The new Executive Secretary would need time to reassess WARDA's objectives. Hence, it would be best to defer the TAC Quinquennial Review, perhaps having an interim report in the fall of 1978.

ICARDA

14. Dr. Darling reviewed the current status of ICARDA. He emphasized the importance of Lebanon, where in addition to a Beirut office, arrangements might be made to plant on land owned by the American University. The aim

throughout would be to make do with simple and cheap structures. There was some skepticism as to the realism of the budgets. There was some discussion of the extent to which ICARDA should work on irrigation, it being pointed out that some 9 million hectares were to be brought under irrigation in the Arab lands. It was noted that there was an Arab drylands research center funded by the Arab League, in Syria.

#### CIMMYT

15. Dr. Finlay made no secret of his lack of enthusiasm of TAC Quinquennial Reviews. CIMMYT's own In-House Reviews are to him far more important and useful. One would be held at the end of August, whereupon CIMMYT would probably want to revise its budget from 1980 on.

#### CIAT

16. Sir Charles Pereira summarized the conclusions of the Quinquennial Review of CIAT. Quarantine dangers were stressed. Dr. Nickel thought that CIAT had greatly improved its budgetting, which were characterized by "economy and precision."

#### Other Matters

##### Vegetable Research

17. A subcommittee had been set up -- Drs. Ajibola Taylor (Chairman), Joshi, Camus and Blumenschein -- which would further examine the vegetable proposal considered at the 15th TAC meeting. The subcommittee's terms of reference were approved after amendment, and they were urged to advise TAC on a decision as rapidly as possible.

##### Soybeans

18. Although the soybeans proposal had been around for a long time, it was felt important to get a detailed and specific proposal for discussion with donors. This would take time, and a firm proposal would not be available for the September CG meeting. Dr. Ruttan thought it unlikely that soybeans would contribute much to food production in the tropics and Dr. Joshi was unenthusiastic for their usefulness in India.

##### Farming Systems

19. The "stripe review" is underway. CIAT had been visited in conjunction with the Quinquennial Review. IITA (in conjunction with the TAC Review), IRRI and ICRISAT would be visited in due course. National and regional programs might be visited.

##### Agroforestry

20. The status of ICRAF was reviewed. It is expected shortly to relocate to a developing country.

Water Use and Management

21. A team was being assembled with IDRC support. It would report in September 1978.

Desertification

22. The UN had asked for TAC assistance. A decision would be made once there was a detailed work plan.

Strengthening National Agricultural Research

23. Dr. Cummings reported on the Munich meeting. What was referred to as the "IADS Proposal" had not been formally presented to TAC nor the CG. This could be a major item on TAC's September agenda. Staff work was needed to prepare a workable proposal. He would have personally to disassociate himself from it.

24. Dr. Hopper hoped the CG would not make any decision without TAC's advice, for which he proposed a small subcommittee. There were other alternatives besides IADS itself. Center Directors should be actively involved in the preparation of a proposal. It was on the agenda of the Directors' June '77 meeting.

Water Buffalo

25. Dr. Mahadevan's report, read for him due to illness, was very well received. It was felt that at last TAC had a specific and well thought out proposal. It was pointed out that donors had previously been very lukewarm about buffalo research. Some TAC members thought the time had come for TAC to take a definite position.

26. The consultant would be asked to provide cost estimates for his recommendations (which are summarized in the attachment).

Japanese Support for 1978

27. Dr. Coulter took advantage of the presence of Center Directors to inform them privately of the Secretariat's expectations from Japan for 1978.

Review of Commentaries

28. Budget sections of commentaries were all reviewed with Center Directors. Some program sections were. The TAC Secretariat was most insistent that program questions not be discussed with Center Directors except in their presence.

June 1978 Meeting

29. Dr. Henson invited the Center Directors and TAC to hold its 19th meeting in conjunction with the Center Directors at ILRAD, provided

the conference facilities were ready as expected. Failing that, Dr. Gamble would invite them to IITA.

Training Forum

30. Mr. Hayman and Dr. Bommer met separately with Dr. Fernandez to review progress on his training paper. Dr. Fernandez maintained that he would have no difficulty in covering the topic as required within the proposed timetable.

## Water Buffalo Research (Agenda Item 6)

The Chairman recalled that TAC had at its last session, agreed to appoint a consultant seconded by FAO, Dr. Mahadevan in order to formulate in more details the project proposal which emanated from an earlier TAC expert consultation on water buffalo research needs held in Singapore in 1976.

In line with his terms of reference, the consultant visited a number of countries, particularly in Asia and was requested to give a verbal presentation of his findings to this meeting for guidance in the completion of the report. The report was due to be formally presented at the 17th Meeting in Washington. Unfortunately, Dr. Mahadevan fell ill just prior this meeting and could not himself present his report. Dr. Muller Haye, Agricultural Research Officer, Research Development Centre, FAO, who had been associated with the earlier preparations of the project proposal had been invited to make the presentation prepared by the consultant.

Dr. Muller Haye reported that the consultant had visited India, Srilanka, Pakistan, Thailand, Phillipines, Indonesia and Egypt. His visit to Brazil enroute to this TAC meeting at Cali, had to be cancelled.

The findings of the mission were presented through a series of transparencies illustrating the importance of the water buffalo, the constraints on buffalo development, the major research needs and priorities. Different alternatives were then presented regarding the organization and the scope of an international effort required to meet identified research needs.

The importance of the domestic water buffalo was first stressed, its total population being of the order of 130 million, India having about half of the world population, China and Pakistan being second and third with 30 and 10 million respectively. Some countries (e.g. Phillipines, Thailand) had substantially more buffaloes than cattle. In some other countries (e.g. India and Pakistan) although cattle number were far in excess of buffaloes, buffaloes play a much important role in the national economy as

a source of milk, meat and farm power. Nevertheless, despite its importance, water buffalo remains an under exploited resource as the techniques at the small farm level remained unchanged for centuries.

The consultant had identified three major constraints to water buffalo development: lack of research, inadequate testing of research results on a field scale, lack of effective extension effort. The importance of effective extension could best be demonstrated by the Kaira cooperative Milk Producer's Union in Gujarat, India. This experience, involving over 700 village cooperative societies of small farmers, had shown that, with the application of known technology and appropriate infrastructural and institutional development, the productivity of water buffalo could be increased by as much as 50 percent with a marked increase in cash income from milk. This type of development however, remained the exception. In most cases, farmers own only two or three animals, which make testing and demonstration of improved technologies extremely difficult.

The lack of research on water buffalo was considered by the consultant as a constraint which limited buffalo productivity as much as the lack of extension effort and the inadequate testing of research results in farmer's conditions.

The consultant had attempted to classify the major technical constraints in the field of research into three categories and had arrived at priority research topics and programmes under each category.

(i) Category I topics and programmes are those that are important to all countries and are basic to improving buffalo productivity the world over. They relate to problems that are technically complex and also demanding in terms of investment. They are unlikely to be effectively resolved in the foreseeable future without direct international intervention.

(ii) The second category of topics and programmes were those, which by their very nature, cannot be tackled by national institutions working on their own, but require the active cooperation of a number of national institutions in different countries. International intervention in this case would be to help organize, implement and coordinate the cooperative activities.

(iii) Category III topics and programmes were those which are location-specific or site-specific, and which can and should be resolved by national institutions, perhaps with assistance from bilateral funding sources. The role of international intervention here would be principally to assist in evolving methods and techniques, and finding ways and means, appropriate to specific national research tasks.

Under the first category, the consultant had identified two major research topics: straw utilization and reproductive efficiency. Whereas water buffalo was fed primarily on straw, national research had seldom concerned itself with the problem of straw utilization and supplementation. As to reproductive efficiency, it was known to be the widest limiting factor to water buffalo development and past research had not generated the technology to remove this constraint. For each of these topics, the consultant proposed a series of research items which he considered unlikely to be adequately tackled in the foreseeable future without international intervention.

Under the second category, feed evaluation research and its standardization on the one hand, and testing of different breeds and strains of water buffalo on the other hand, were considered as the main priorities for cooperative research programmes among national institutions. For each of these topics the consultant had identified a number of specific problems and outlined the research programmes. These activities would have to be supplemented by workshops, seminars, training courses, fellowships and consultancies.

Under the third category e.g. priority topics for research at national level, the consultant recommended to make surveys on several aspects of water buffalo production, in particular on the availability and utilization of local feeds, the socio-economic constraints at the small farms level, and the economic losses caused by different diseases. He also recommended the development of methods and techniques of progeny and performance testing of sires relevant to local conditions, and the development of new technology packages based on research results for demonstration at small farm level. These activities should be supported by an important effort in developing sustained documentation programmes in each country.

The consultant had then considered the organizational alternatives which could deal with these three categories of research topics, in particular categories I and II which called for international cooperation and support. The consultant recommended against the establishment of an international centre, mainly because of the importance of the capital requirements and the delays involved before effective results could be available to national programs. A second alternative was the creation of an international board for buffalo research which would enter into research contracts with selected institutions to resolve components of category I topics. This alternative would however, provide piecemeal solutions to category I programmes and would not be able to handle effectively the coordination and cooperation required between national institutions for the research programs under Category II. The consultant therefore recommended a third alternative, setting up an international cooperative network of national institutions for buffalo research guided by a small coordinating unit under an international board. Criteria were then presented by the consultant for the location of the coordinating unit and major centres of research were listed for each main category of topics for research.

The consultant had finally considered a number of possibilities in launching the proposed programme in a step by step approach assuming more limited funding possibilities ranging from the consideration of one single research topic under Category I to different combinations of related topics (e.g. animal nutrition and/or reproduction) under Categories I, II and III. It was noted that these alternatives were not mutually exclusive and may call for different type of funding (e.g. through the CGIAR or through direct bilateral assistance). The consultant sought the guidance of TAC on the alternatives which were likely to be acceptable to potential donors. He would then endeavour to prepare more detailed project proposals and cost estimates on the most viable alternatives.

The chairman thanked Dr. Muller Hays for the presentation of what he considered an excellent report. He considered that the terms of reference of the consultant had been fulfilled and looked forward to the presentation



of the final report to TAC. The chairman wished to record TAC's appreciation for the work of the consultant Dr. Mahadevan and his gratitude to Dr. Bommer and to FAO for his contribution. Many members of the committee joined the chairman in praising the report of the consultant.

Several members however, expressed their concern about the availability of funds for water buffalo research project. Some felt that, while little interest had been shown last year on the part of the donors for an earlier proposal in this field, a wider support <sup>has</sup> ~~may~~ be found now that the project proposal had been significantly improved. It was recognized that the main task for TAC was to advise the CGIAR on research needs and to develop sound research programs proposal independently of consideration of availability of funds. *now that*

With this report in hand, it was considered that TAC could not further postpone a decision on the matter.. It was important however, that the consultant develop cost estimates in regard of each of the alternatives which he had proposed. In this context it was suggested that the consultant give also some information on the scale of efforts being made concurrently by national programs in this field.

Several members addressed the problems of priorities among research topics and generally agreed that animal feeding and reproductive efficiency were the major constraints. A network-type of organizational structure was generally supported as enabling flexibility in bilateral funding, a larger involvement of national institutions, and shorter delays in the implementation of the research programme. <sup>Some</sup> ~~One~~ member however, expressed doubts about the priority given to research in this field, being convinced that major improvements in buffalo production could be derived from the application of existing knowledge and available technologies.

In closing the open session on this subject, the Chairman indicated the priority to be given to this project proposal would have to be examined in the light of other priorities of TAC, in particular those regarding other projects under consideration.

International Cooperative Buffalo Research Project

Organizational and administrative structure for a comprehensive and integrated buffalo research project.

If all of the priority topics and programmes identified under categories I, II and III are to be included in a comprehensive and integrated buffalo research project, the following organizational and administrative structure would be necessary:

- (i) An International Board consisting of:
  - (a) Four nominees of the CGIAR.
  - (b) A chairman appointed by the CGIAR.
  - (c) The Director of the Project serving as Secretary.
  
- (ii) A Project Directorate consisting of:
  - (a) A Project Director with overall responsibility.
  - (b) An Assistant Director with specific responsibility to assist member countries in developing comprehensive research programmes relevant to local needs and to organize workshop, seminar and training activities.
  - (c) An Extension Specialist to assist member countries in transforming research results into usable technology at the farm level.
  - (d) Supporting administrative and clerical staff.

However, if TAC and CGIAR would wish to adopt a more limited, step-by-step, approach, the organizational and administrative structure may be modified, according to which of the following alternative approaches is chosen.

Alternative approaches.

1. Limit international assistance to a single topic under category I viz. research on straw utilization or on reproductive efficiency.

Four institutions will be actively involved in research on straw utilization (3 in India and 1 in Egypt). Likewise, research on reproductive efficiency will be

centered at four institutions (2 in India, 1 in the Philippines and 1 in Sri Lanka).

Assistance to either group of institutions may be provided either bilaterally or multilaterally. If bilateral support is the chosen method, direct contractual arrangements could be made between different bilateral donors and each of the institutions concerned. The principal advantage of this method is that it would do away with the overhead expenses involved in setting up an International Board and a Project Directorate. However, the Consultant's major concern over this approach relates to the problems of management and accountability to a common programme. How can the work of individual national institutions funded by different bilateral donors be made to serve an international purpose? It would seem to the Consultant that only the spin-off from national research would be of international value under this kind of arrangement.

Where assistance is provided multilaterally, however, the advantage is that it should be possible to coordinate and guide the activities of the participating national institutions in such a way as to provide comprehensive national and international solutions to the problems being tackled. Moreover, if the assistance is limited to research on one topic only, namely straw utilization or reproductive efficiency, the coordinating function can be assigned to a relatively small coordinating unit consisting of a Project Director and supporting administrative and clerical staff. But it would not be possible to do away with the International Board to which the Project Director would be accountable.

However, it should be feasible to initiate action in the first instance through bilateral arrangements and follow this up later with an internationally coordinated programme.

2. Provide international support to both topics under category I  
viz. research on straw utilization and on reproductive efficiency.

Here again, bilateral or multilateral assistance may be envisaged, with the same advantages and disadvantages. It would be relevant to note that research on straw utilization may be regarded as a medium-term project of about 5-7 years duration, while

that on reproductive efficiency would be a longer term one of about 7-10 years, depending on the magnitude of the bilateral or multilateral resources likely to be available.

If multilateral assistance is the preferred method, a small Project Directorate and an International Governing Board would be necessary. But once again, initial action may be undertaken bilaterally and this could be followed up later by an internationally coordinated programme.

3. Include all topics under categories I and II for international action  
viz. research on straw utilization, reproductive efficiency, feed evaluation and international breed and strain testing; and research workshops, seminars, training courses, fellowships and consultancies.

It is unlikely that this alternative could be implemented through bilateral arrangements. Multilateral assistance would require the establishment of a Project Directorate consisting of a Director, an Assistant Director, supporting administrative and clerical staff and an International Governing Board.

4. Combine international support to research on a single topic under category I with support to appropriate related programmes under categories II and III  
e.g. (a) Research on straw utilization + feed evaluation research + generation and demonstration of new nutritional technology applicable at the farm level based on the results of research.  
or (b) Research on reproductive efficiency + international breed and strain testing + progeny and performance testing of young buffalo bulls.

This would represent a kind of vertical integration of related category I, II and III topics and programmes. It would be virtually impossible to undertake this combination of activities without the services of a Coordinating Unit consisting of a Director, an Assistant Director, an Extension Specialist, supporting administrative and clerical staff and an International Governing Board.

Summary

These alternative approaches are not mutually exclusive. It should thus be possible in the first instance to initiate international action on buffalo research bilaterally by choosing either alternative 1 or alternative 2 above. This could then be followed, if desired, by either alternative 3 or alternative 4; and eventually consideration could be given to a more comprehensive and integrated international buffalo research undertaking.

In view of this, the Consultant wishes to seek TAC's guidance on the preparation of detailed project proposals and appropriate cost estimates. It would be helpful to the Consultant if TAC could indicate at this stage, the alternatives or combination of alternatives that are likely to be acceptable to potential donors. He could then concentrate attention on preparing project proposals and cost estimates on the most viable alternatives.

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CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
TECHNICAL ADVISORY COMMITTEE

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Via delle Terme di Caracalla, 00100 Rome, Italy  
Cables: FOODAGRI ROME - Telex: 61181 FOODAGRI  
Telephone: 5797

PR 3/10.16

July 4, 1977

Dear Dan:

This is just to confirm the logistic needs of TAC and its Vegetable Research Subcommittee during the week preceding Centers Week/CGIAR in September, which we discussed on the telephone on Friday.

1. The Vegetable Research Subcommittee will meet on September 7 and 8 - Room E 1056 has been suggested as a venue. Participants will be Dr. Ajibola Taylor (Chairman); Mr. Philippe Mahler and Dr. E. Z. Arlidge (Secretariat), Drs. Blumenschein, Joshi and Camus. Dr. Cummings is also expected to attend.

2. TAC will meet on Friday and Saturday, 9 - 10 September. C 1006 has been its venue in the past and I was pleased to hear that this room may be available also this year. Up to 35 participants may be expected. Tape recordings of the proceedings will be required.

3. Office accommodation would be appreciated from 6 through 16 September for Dr. Cummings and Mr. Mahler, and 8 through 16 for myself. Dr. Arlidge will also be present but will have office accommodation in the FAO Regional Office. Miss Caryl Jones will form part of the TAC Secretariat and appropriate accommodation would also be appreciated.

The Agenda and background documents will follow in due course. TAC members have been approached regarding their intentions to attend CW/CGIAR and we shall let you know as soon as possible how many we should expect.

I shall look forward to our weekly communications. With best regards,

Yours sincerely,



B. N. Webster  
Deputy Executive Secretary

Mr. Daniel Ritchie  
Deputy Executive Secretary  
Consultative Group on International  
Agricultural Research  
1818 H Street, N.W.  
Washington, D. C. 20433  
USA

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SUBJECT:

DanielRitchie/ms/F2

DRAFTED BY:

Daniel Ritchie

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Daniel Ritchie *Daniel Ritchie*

DEPARTMENT:

CGIAR SECRETARIAT

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CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
TECHNICAL ADVISORY COMMITTEE

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PR 3/10.16

April 26, 1977

TO: Members of the Technical Advisory Committee  
Members of the Consultative Group on International  
Agricultural Research  
Directors of the International Agricultural Research Centres

FROM: The Executive Secretary, TAC *Handwritten initials*

SUBJECT: Sixteenth Meeting of the Technical Advisory Committee

1. The Sixteenth Meeting of the Technical Advisory Committee will be held at the headquarters of the Centro Internacional de Agricultura Tropical (CIAT), Cali, Colombia, from 30 May to 3 June, 1977.
2. Accommodation is being arranged by CIAT and therefore members and observers anticipating attending are requested to inform both this office and Dr. John Nickel, the Director General of CIAT as soon as possible of their intentions to attend and their ETA's and flight numbers to facilitate transportation. The address of CIAT is: Apartado Aereo 67-13, Cali, Colombia; cable: CINATROP, Cali.
3. For the information of TAC members, air tickets will be issued prepaid in the usual way.
4. Members of the Consultative Group are reminded that they are free to appoint a single observer each to attend OPEN sessions of the meeting.
5. The Provisional Agenda for the meeting is submitted herewith. The Report of the 15th meeting will follow shortly. The main purpose of the meeting is for the Committee to consider in Closed Session the 1978 Programmes and Budgets of the International Agricultural Research Centres along with the draft Secretariat commentaries. The second draft of the CIP Quinquennial Review report and the first draft of the CIAT Quinquennial Review report will be discussed during the sessions devoted to those two Centres.
6. The Programmes of Work and Budgets will be distributed directly from the Centres to all TAC Members.
7. The Committee will also discuss in open session progress reports on vegetable research, soyabeans, farming systems research, and the preparation

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of the Quinquennial Review of IITA. Relevant documentation on the above subjects will be distributed as soon as available.

8. The Secretariat will be pleased to answer any enquiries which members or observers may wish to submit.

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
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SIXTEENTH MEETING

Cali, Colombia -- 30 May - 3 June, 1977

PROVISIONAL AGENDA

Monday, 30 May

9.00 - 12.30 Morning Session OPEN

Welcome Address by the Director-General of CIAT,  
Dr. John Nickel

Item 1 Adoption of the Agenda

Item 2 Adoption of the Report of the 15th Meeting

Item 3 Progress Reports on Vegetable Research, Soyabeans, Farming  
Systems Research, Preparation of IITA Quinquennial  
Review, etc.

14.00 - 17.00 Afternoon Session CLOSED

Item 4 Consideration of the Report of the Quinquennial Review  
of CIP and of CIP's Programme and Budget for 1978

Tuesday, 31 May

9.00 - 12.30 Morning Session CLOSED

Item 5 Report of the TAC mission to ILCA and ILCA's Programme  
and Budget for 1978

Item 6 Report on TAC Water Buffalo Research Mission

14.00 - 17.00 Afternoon Session CLOSED

Item 7 Review of Centres Programmes

(a) IIRI

(b) IITA

Wednesday, 1 June

9.00 - 12.30 Morning Session CLOSED

Item 7 (c) WARDA (d) ICRISAT

14.00 - 17.00 Afternoon Session CLOSED

Item 7 (e) IBPGR

Formulation of recommendations on Items 3 and 6 and the Programmes of Work and Budget of CIP, ILCA, IRRI, IITA, WARDA and ICRISAT

Thursday, 2 June

9.00 - 12.30 Morning Session CLOSED

Item 8 Consideration of the draft report of the Quinquennial Review of CIAT and CIAT's Programme of Work and Budget for 1978

14.00 - 17.00 Afternoon Session CLOSED

Item 7 (cont.) (f) ICARDA (g) CIMMYT (h) ILRAD

Friday, 3 June

9.00 - 12.30 Morning Session CLOSED

Formulation of recommendations on the Programmes of Work and Budget of IBPGR, CIAT, ICARDA, CIMMYT and ILRAD

14.00 - 12.30 Afternoon Session OPEN

Item 9 Other Business

Item 10 Date and Place and Agenda of Next Meeting

Item 11 Chairman's Summing-Up.

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## OFFICE MEMORANDUM

DATE: March 4, 1977

TO: Files

FROM: John K. Coulter *mc.*SUBJECT: Notes on 15th TAC Meeting, January 31-February 4, 1977

This meeting had a new Chairman (Dr. Ralph W. Cummings) and four new members (Dr. Hidetsuga Ishikura, Dr. A. B. Joshi, Dr. Antoine About Khaled and Dr. W. David Hopper). With the exception of Dr. Guy Camus (and Dr. Hopper), none of the other members have had more than one year of service, a factor which became evident on some occasions, when lack of familiarity with previous TAC discussions led to new discussions and occasionally what appeared to be a reversal of previous decisions.

2. Nevertheless, the standard of discussion was good; some of the new members are obviously well acquainted with the work of the CGIAR and the Chairman kept the discussions in order and made an excellent job of summing up the proceedings.

CIP Quinquennial Review

3. The meeting was complimentary about the draft report, but felt that it emphasized some of the negative aspects, rather than positive achievements of the Center, and the TAC Secretariat agreed to some rewriting to reflect this emphasis.

4. There was little discussion on the scientific issues raised in the report; the point was made that whilst the early centers developed a strong on-site research program before embarking on cooperative research programs, CIP and its regional/national programs, were "growing up" together, thus raising the question as to whether this would be a successful approach. Some reference was made to the amount of travelling done by headquarters staff and the statement of management that setting up a regional staff organization would not reduce this. A finalized draft of the report will be presented at the 16th meeting of the TAC.

Vegetable Research

5. The TAC has had three reports before it on this subject. On the first occasion, a report prepared by the Rockefeller Foundation, was not accepted by the Committee. Subsequently, TAC mounted a mission, under Dr. Marcano, which visited various countries in Africa and Asia and recommended two centers for vegetable research. This proposal was regarded as too ambitious and a third mission, consisting of two people (Thrower, from FAO, and Choudhury, a consultant from India), visited countries in Africa and Asia to determine suitable locations for establishment of pilot projects.

6. Their report proposed two pilot projects -- one in Africa, possibly on the IITA campus, with a sub-pilot project in a francophone country, probably Senegal, and a second pilot project in Sri Lanka. Discussions on this

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document concentrated on the location specific nature of vegetable research, the range of vegetables that were considered important and the value of vegetables in the diet. Discussion also took place on possible methods of funding outside the CGIAR system and what would become of the pilot projects if they were successful.

7. The final recommendation was to set up a TAC subcommittee to study the matter further; terms of reference for this subcommittee will be provided for the next TAC meeting.

#### Water Buffalo

8. This subject came before the TAC as long ago as its 7th meeting and has been discussed at each subsequent meeting. The TAC sponsored an expert consultation on water buffalo research, the report of which was discussed at the 13th meeting; this was generally adopted, but because of the apparent lack of donor support, the 14th meeting proposed a different approach and TAC is now mounting another mission, using one consultant (Dr. Mahadevan of FAO). The terms of reference for this consultant are as follows:

"Under the supervision of the Executive Secretary of the TAC, the consultant will, with the cooperation of FAO, formulate a project proposal for international support to an inter-country cooperative research program on the water buffalo."

The consultant will study what research is taking place and note the constraints to improvement of the animal. Various alternative methods of international cooperation and the methods of funding these, outside the CGIAR, will be explored. The report, which will be presented to the 16th meeting of TAC, might be followed by a meeting of possible donors to explore their interests.

9. One TAC member, Madamba, raised considerable opposition to this new proposal, though it was not clear whether he opposed it on technical or political grounds. I got the impression that his opposition arose from his feeling that the consultant should come from the FAO Regional Office in Asia, rather than from FAO headquarters.

#### Soybean

10. In the week prior to the TAC meeting, an ad hoc informal meeting was called by FAO (27-28 January, 1977), with the purpose of discussing a proposal for the establishment of a soybean research consortium. The meeting was attended by representatives of INTSOY, Brazil, India, FAO and the TAC. Bommer of FAO chaired the meeting.

11. The meeting suggested that the major objective in soybean research would be to link major existing research programs to be used as a resource base.

Such an objective could be attained by the creation of a consortium which would need a small managerial structure and a board and a provision of additional financial resources to strengthen the international role of the participating institutions. Initially, INTSOY, EMBRAPA, IITA and AICSRP (All India-coordinated soybean research project) would be represented in the consortium. It was suggested that the board consist of about nine members, including a chairman and that there should be an executive secretary and a secretariat, staffed by international staff, and located at an international organization such as FAO or IITA.

12. This report of the informal meeting was discussed at the TAC meeting. Members generally supported the idea and it was agreed that the Chairman of the TAC should explore the kind of organizational structure and the financial resources necessary, so that a more specific proposal could be put before the TAC for its consideration at the next meeting.

#### Coconut Research

13. TAC had before it a report of a meeting on coconut research in Kerala (28-31 December, 1976). Discussion centered round the need for research on certain serious diseases, on germ plasm collection and vegetative propagation, on post-harvest technology and on locale specific management needs. The Committee decided to keep coconut research under active consideration and suggested that some sort of mechanism for a research project, akin to that suggested for soybean, might be appropriate.

#### Agro-Forestry

14. Dr. Bene of IDRC presented his report; members of the TAC endorsed the idea that agro-forestry was an important component of agricultural development. It was suggested that the IITA campus might be an appropriate site for carrying on some of this research and the idea of setting up an International Board of Agro-forestry Research was put forward. IDRC have organized a meeting in Amsterdam, 5-6 April, 1977 to discuss the project. The TAC would keep the item on its agenda and welcome reports of progress, but would not take any positive steps at the moment.

#### Forest Genetic Resources

15. A proposal by FAO was presented to the meeting. This suggested a five-year global program, some of which would be financed by the CGIAR through the Genes Board. Of the \$5.0 million to be spent over five years, \$2.0 million would be expected to be available from continuation of existing programs and \$3 million from new programs, including \$0.85 million from UNEP and \$0.87 million from CGIAR.

16. The Genes Board asked for guidance from the TAC as to whether and to what extent it should consider forest genetic resources within its program. The TAC requested the Board to include a specific item in its 1978 P&B paper on forest genetic resources, so that this could be considered at the next meeting of the Committee.



### Aquaculture

17. The Committee had before it a program development statement on ICLARM (International Center for Living Aquatic Resources Management), which is now being set up with headquarters in Manila (hitherto the temporary headquarters had been in Honolulu). The Center has a budget of \$1.94 million in 1977 and expects to have one of \$3.0 million in 1978. The TAC decided to keep the item on its agenda. The IDRC is commissioning a study team to review the various initiatives in aquaculture.

### Quinquennial Reviews

18. Arrangements are being made for the quinquennial review of CIAT, to take place 18-30 April and that of IITA, October 30-November 12. The Committee agreed that the terms of reference for the review should be sent to the donors to the respective centers who would be invited to inform the TAC Secretariat of any specific questions which they would wish to have considered.

### Water Management

19. This topic has been on and off the agenda of the TAC since its earliest days. At one stage the idea of a water management institute was considered and rejected. At the 14th TAC meeting it was decided that the major problem in water management was in the farmers' fields and thus was not so much a research as a management issue. At its current meeting, the Committee decided to re-examine the question once more which, I presume, will mean requesting FAO to put up further background papers.

### Closed versus Open Sessions

20. Attendance by donors of the Group at TAC meetings appears to have declined greatly to the extent that only USAID was directly represented at the last two meetings. Several donors have explained that they did not consider it worthwhile sending representatives because so much of the business was carried on in closed session. Dr. Hopper brought up the question as to whether, in fact, so much closed session discussion was necessary (for example, discussion of the vegetable research project was in closed session), and the Chairman undertook to re-examine the need for this.

### Issues

21. The general issue which appeared throughout the discussions was that of the question of priorities. Seven projects were discussed by the TAC at this meeting and it would appear that, on present thinking, the Committee is not proposing to bring any of these before the CGIAR as a group, for financing. They are, in fact, considering ways in which each could be financed by some form of mini-consortium of donors using bilateral funds. While such a mechanism may function for one or two initiatives, for example post-harvest technology, the use of such a mechanism for all those projects under discussion, would

impose considerable strain on the whole system. At my request, the TAC Secretariat will prepare a document setting out the criteria by which the TAC decides which projects should be brought forward to the Group and those which might be presented to mini-consortia for funding.

22. There is also a more fundamental question on the role of the Committee. If its role is that of an advisory body to the CGIAR, then it might be questioned whether it should also be involved in advising donors outside the CGIAR, even though they are undoubtedly the same as those within the Group.

23. Although the previous Chairman of TAC maintained that the Committee was independent and could thus examine any project which it considered had merit, the list of projects under consideration does not suggest that the TAC is being particularly discriminating. The numbers of initiatives are now such that a more systematic approach, vis-a-vis the CGIAR, might be more appropriate. Such an approach might involve a series of preparatory documents based on desk studies describing the nature of the project, the problems that the research would attempt to solve, the likely impact of such solutions and the priority that the Committee would attach to such projects, at the same time indicating the criteria by which such priorities were determined.

24. The Committee might argue, of course, that there is normally insufficient information to carry out these desk studies, but if such information does not exist already, then the expensive short-term missions, which are mounted, may not be able to collect any considerable amount of additional key information.

25. If the Group was presented with these preparatory documents and the accompanying judgment of TAC on their priorities, it could select those proposals which it would be prepared to support and thus indicate to the TAC what further preparation was needed and could also indicate those projects which the Group regarded as outside its collective interests.

26. At the moment the TAC seems to be involved in identifying projects, in project preparation and in appraisal and perhaps such a close integration does not necessarily give the Group the independent judgment which it requires.

cc: Messrs. Baum, Yudelman, Fransen, Lejeune, Ritchie, Hayman and Gavino

JKCoulter:apm

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CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
TECHNICAL ADVISORY COMMITTEE

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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PR 3/10.15

DEC 20 1976

TO: Members of the Technical Advisory Committee  
Members of the Consultative Group on International  
Agricultural Research

FROM: The Executive Secretary, TAC

SUBJECT: Fifteenth Meeting of the Technical Advisory Committee

1. The Fifteenth Meeting of the Technical Advisory Committee will be held in the Ethiopia Room (C 285) at FAO Headquarters, Rome, from 31 January - 4 February, 1977. The meeting will open at 14.30 hours. The provisional agenda for the meeting is attached hereto, further documentation will follow in due course as indicated below.
2. Hotel accommodation is being arranged by the Secretariat at the Hotel Victoria, Via Campania 41. Therefore, members who do not wish to stay at this Hotel should inform the Secretariat as soon as possible. In view of the need to make early reservations for hotel accommodation, observers wishing to attend are asked to notify the Secretariat of their requirements as soon as possible.
3. For the information of TAC members, air tickets will be issued pre-paid in the usual way and unless prior information is received regarding specific routings required they will be by the most direct route.
4. Members of the Consultative Group are reminded that they are free to appoint a single observer each to attend open sessions of the TAC.
5. The main purpose of the meeting is for the Committee to consider in closed session the draft reports of the Quinquennial Review of CIP and of the TAC Tropical Vegetable Research Mission. These Missions will be completed during the next few days and their draft reports will be distributed simultaneously under separate cover. As far as the Tropical Vegetable Research Mission is concerned, attention is called to the earlier documentation on this subject. 1/

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1/ Copies of background documentation will be sent to all new members of TAC.

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The Committee will also discuss in open session research priorities in the field of Agro-forestry and Forest Genetic Resources. Documentation on these items include a report from IDRC 1/ entitled "The Tropical Forest - Overexploited and Underused. Research Priorities in Tropical Forestry", and a note prepared by the TAC Secretariat recapitulating relevant information on this subject. This note and several progress reports on ongoing activities will be tabled at the meeting.

6. Newly appointed members of the Committee are invited to attend a briefing session to be held at 11 a.m. on Monday, January 31 in the Ethiopia Room (C 285).

7. The Secretariat will be pleased to answer any enquiries which members or observers may wish to submit.

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1/ Copies of background documentation will be sent to all new members of TAC.

FIFTEENTH MEETING OF THE TECHNICAL ADVISORY COMMITTEE

TO THE CONSULTATIVE GROUP ON

INTERNATIONAL AGRICULTURAL RESEARCH

31 January - 4 February, 1977

Rome, Italy

DRAFT PROVISIONAL AGENDA

Ag   a Item

Monday 31 January                      P.M. 14.30 - 17.30 (OPEN)

Opening Remarks by the Chairman

1                      Adoption of the Agenda

2                      Adoption of the Report of the 14th Session

3                      Report by the Chairman on the CGIAR Meeting of 27-29 October, 1976

4                      Progress Reports and Future Activities

(a)    Quinquennial Review of CIAT and IITA

(b)    Aquaculture

Tuesday 1 February                      A.M. 09.30 - 12.30 (OPEN)

4 (cont.)                      (c)    Farming Systems Research

(d)    Coconut Research

(e)    Water Buffalo Research

P.M. 14.30 - 17.30 (CLOSED)

5                      Draft Report of the Quinquennial Review of CIP

Wednesday 2 February                      A.M. 09.30 - 12.30 (CLOSED)

6                      Draft Report of the TAC Mission on Tropical Vegetable Research



Nov. 1, 1976

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CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

TECHNICAL ADVISORY COMMITTEE

FOURTEENTH MEETING (14-18 OCTOBER 1976)

ICRISAT, HYDERABAD, INDIA

DRAFT

SUMMARY OF RECOMMENDATIONS AND CONCLUSIONS

Review of the Committee's Role (Agenda Item No. 3)

1. The Committee welcomed this report which in many places clearly recognized the role of TAC, especially in the confirmation of its priorities.

2. The role of the Committee had been strengthened and attention drawn to its terms of reference which would clearly necessitate the Committee keeping closely in touch with the frontiers of agricultural science both internationally and nationally.

3. The Committee accepted the emphasis on its role expressed in the Review Committee's Report, whereby TAC would be expected to maintain a continuing review function on the activities of the IARC's, whilst TAC would be continuing to explore the needs for new activities. It welcomed the proposals for closer working relations between the two Secretariats and especially the joint activity in preparation of the Centre program commentaries and of the Integrative Report arrangements which are being made, in anticipation of CG approval, to give effect to these steps.

Number and Duration of TAC meetings (Agenda Item No. 4)

4. Several considerations were taken into account when examining the possibility of holding two long TAC meetings instead of three per year. Firstly, the CGIAR Review Recommendations, if approved, would call for an increased involvement of TAC in the review of the Centres' programme, while continuing to assess the need for new initiatives and additional fields of research. Secondly, a closer interaction between the CGIAR and TAC, and between their respective Secretariats was now felt more important than ever.



There was therefore a large degree of consensus among TAC members for reverting to the former practice of holding a TAC meeting in conjunction with the Centres' Week. Thirdly, it was essential to give TAC sufficient time for examining the programs of work and budget of the Centres and then for its Secretariat and that of the CG to jointly prepare the integrative paper and commentaries for consideration by the CGIAR. Finally, a number of other factors should be considered such as the costs involved, the availability of TAC members and the need to keep within reasonable limits the duration of the meeting and the number of topics which can be efficiently dealt with during one session.

5. Although a few members would have preferred holding only two meetings a year, a majority felt that a number of factors and new developments had made the holding of three meetings per year unavoidable. It was felt, however, that while two meetings could have the usual 5-day duration - preferably starting at the beginning of a week - the third one could be shorter if held in conjunction with the Centres' Week.

6. TAC was informed of the possibility now being considered by the CGIAR Secretariat of holding CGIAR meetings in early September and mid-November - instead of end July and October - respectively. Should this new schedule be adopted, TAC could contemplate the following time table for its meetings :

- I. a five day meeting in February in Rome to deal with general questions, the quinquennial reviews and new priorities.
- II. a five day meeting at the headquarters of an IARC end of May or early June - mostly for the consideration of the programs of the Centres and the quinquennial reviews.

- iii. a two day meeting preceding the Centres' Week in September.
7. Should the present schedule of the CGIAR meeting be maintained, similar arrangements would be made as above but planning the two day meeting during the third week of July and possibly also adjusting the dates of the other meetings.

Priorities within and between Centres (Agenda Item No. 5 (a))

8. The Committee noted, with some sympathy, the reluctance of most Centres' Directors and their Boards to provide details of the 'within' program priorities which they would intend to follow in the event of a real shortfall in financing becoming a danger. It felt, nevertheless, that all Centres would have established such priorities even if not prepared to divulge them and would be prepared to exercise self-discipline in the preparation of future programmes, given a situation of slower expansion of the level of funding.
9. The role of the TAC in assisting the Centres to reach fall-back positions was discussed at length and it was agreed that TAC should continue to fill an advisory role. A TAC presence in any standby committee of the CGIAR which might be established was essential. The timing of TAC intervention was examined in the light of possible new schedules for Centres' budget presentations, Centres' Week and TAC meetings. Two levels of fall-back were also postulated, that of a catastrophic decline in fund availability, though the withdrawal of one or two major donors, and that which might be necessary to apply to situations in which otherwise approved increases in programs, were not matched by increased finance.

10. Standing up the discussion the Chairman suggested acceptance of the CGIAR Review Committee's premise that a moderate increase in programs should be expected to continue including some new developments and additions to programs.

11. Given this Centres should be alerted to the need for planning fall-back positions both in respect of catastrophic shortfall and minor short-fall of normal funding.

12. In summary, four key-note points should be recorded :

- (i) that Centres must exercise self-discipline in program presentation.
- (ii) that in the allocation of short-fall between and within Centres 'across the board' cuts should not be tolerated but the TAC should assist with an input to both the Centres and the standby committee, in priority assessment.
- (iii) that formal mechanisms between TAC and the Centres are less important for this process than ensuring a dialogue beginning with the May/June meeting between TAC and Centres Directors.
- (iv) that this process be continued through until the Centres' Week meeting assisted by the Joint preparation of Program Notes and the Integrative Paper by the CGIAR and TAC Secretariats.

Cooperation and Relationships with Centres (Agenda Item No. 5 (b))

13. TAC noted with satisfaction the increasing number of agreements which have been or are being established. It is recognised that these agreements involve complex relationships not only between the headquarters and outreach programs of the IARC's but also with other international and regional institutions and national programs. TAC would welcome it if Centres' Directors could draw up at one of their forthcoming meetings some general principles for the formulations of these agreements.

14. TAC supports the recommendations of the CGIAR Review Committee to leave to the IARC's the initiative and responsibility to further develop these agreements. It also supports the recommendations that these agreements should be formalized in writing. TAC sees its role in this context as one of stimulation and monitoring. Should a problem arise in reaching these agreements, TAC will continue to offer its good offices to the Centres concerned.

Nitrogen Fixation (Agenda Item No. 6)

15. The TAC commended the excellent presentation by Dr. P.J. Dart, welcoming particularly the evidence for expanding work at the appropriate IARC's on problems of soil microbiology in general and nitrogen fixation in particular.

16. A number of the problems outlined by Dr. Dart in his proposals for the future were under investigation at IARC's and other advanced countries already, but the IARC's work was limited.

17. The TAC agreed that IARC's should not become involved in the commercial production, distribution, monitoring of Rhizobium but should carry collections of these strains appropriate to their crops and set up pilot operations if required to train and demonstrate to, national programme personnel.

Water Use and Management (A.2.2.2.1)

18. TAC has considered again the priorities and needs for an international support to research in the field of Water Use and Management on the basis of a document prepared by FAO on this subject. TAC agrees with the views expressed in the paper that the main problems in irrigated agriculture lie at farm level where there are major requirements for the adaptation of known technologies to local conditions and their adoption by the farmers. It also recognized that this adaptation depends on a number of local factors and on national policies, legislation and institutions in the field of water resources, it felt that these requirements for adaptation of technologies could best be met in the context of land and water development and conservation projects, in particular those dealing with irrigation, drainage and related land consolidation activities.

19. The first two stages of water management are the protection of streamsource areas and the control and routing of runoff from farmlands, in particular under conditions of rain fed agriculture. Both are properly the concern of national governments. The third and equally critical stage in water management and use is on the farm. It is here that the IARC's can provide important help in the design of cultivation and cropping systems for rainfed farmlands and the development of simple irrigation devices. Study of the economics of water use on small farms is a further useful contribution.

20. TAC recommended an increase in the resources devoted to soil and water engineering and to the quantitative physical and biological study of

soil water storage and crop water use under field conditions. IARC's should become centres of innovative technology in the soil and water relationships for the crops and climates with which they are concerned. TAC should keep a watchful brief on these developments and the recommendations contained in the FAO document may offer a good basis for further discussion by the Committee.

#### Soybean Research (Agenda Item No. 6)

21. The program of INTSOY presented by Dr. Hittale had been expanded well beyond the considerations of production research. It is now emphasized that INTSOY offers to its collaborating countries a total production and utilization package, including basic economic studies, processing, marketing and complete use as food or as an industrial raw material. Thus, essentially it offers a development package. Agreements for cooperative research already exist with eleven countries and one international centre - IITA.

22. INTSOY believes that its current activities do not require an input from the CGIAR. TAC's advice on the further development of the program at the national level and on the involvement of more advanced developing countries in the further dissemination of technologies would, however, be appreciated by INTSOY.

23. The TAC noted the INTSOY package proposal and particularly welcomed the association in research activities with IITA through a Memorandum of Agreement. This went a considerable way to meet the earlier expressed wishes of the Committee, although a need to find continued support for outreach activities was still recognized.

24. The Committee considered two categories of cooperating countries, viz, those where soybean is recognized and needed, i.e. where immediate research work was required; and those where, unless soybean was simply to be regarded as an animal feed, considerable work would be needed to conduct 'popularization' campaigns before following up with a package of production, handling and processing. This, essentially involved a full development project.

25. The successful implementation of a program to introduce or extend the use of soybeans for human consumption will often require local adaptive research and/or technology transfer work leading to establishment of village level or central processing capacity. It may also be necessary to implement programs to encourage the consumption of soybean based foods.

26. TAC was still anxious to seek a mechanism whereby such interested countries as Brazil in particular, could be associated with further activities in support of soybean research and especially the dissemination of results.

27. Methods of ensuring regular contacts between interested countries and organizations and the proper exchange of research results and other material for wide dissemination still needed to be discussed.

28. A suggestion was made that a consortium be established between interested organizations such as INTSOY, IITA and EMBRAPA, with the involvement of FAO, to systematize linkages in research activities and to assist the further development of outreach work. Time did not permit full discussion of the suggestion which would, however, remain on TAC's agenda for a future

meeting after necessary preparations by the Secretariat and the Institutions concerned have been made.

Quinquennial Review of CIMMYT, Report of the Panel (Agenda Item No.2)

29. TAC is in complete agreement with the general endorsement by the Panel of the activities of the Centre and is also in agreement with the confirmation given by the Panel of the soundness of overall objectives and approaches of CIMMYT.

30. It should be first recognized that, whatever the issues which TAC has raised about CIMMYT programmes, these in no way are meant to question the considerable success which the Centre had in the production of high yielding material and in the training of a very large number of research workers who now, in many developing countries, make a core of dedicated scientists and technicians firmly directed towards very pragmatic and production-oriented research in wheat, maize and barley.

31. Several issues were raised by the Panel and further discussed by TAC. They should be considered in the context of this overall endorsement of CIMMYT activities and mostly relate to the long term aspects of the programs. They should not be considered as a criticism of the past activities.

32. TAC again had a long debate on the issue raised by the Panel on the comparative advantage which an international centre such as CIMMYT has in breeding material of wide adaptability. It recognized that the task of



developing varieties adapted to specific environments and local problems is mainly a national responsibility. Relatively few developing countries, however, are in a position to undertake this adaptation work and therefore benefit from the widely adapted material distributed by CIMMYT.

33. TAC reiterated its earlier view that the differences on this issue between the Panel and CIMMYT scientists are more apparent than real. Therefore, TAC recommends that CIMMYT continue to provide material of wide adaptability. The present practice of CIMMYT of distributing segregating material to national programs and encouraging trainees to make crosses which may be relevant to the specific ecological and management conditions prevailing in their countries should be continued. Selection for adaptation to specific growing and disease conditions and consumer preferences should be made in national programs, with the support of CIMMYT, where appropriate.

34. TAC sees the validity of the present principles and methodology of CIMMYT in this respect. CIMMYT should, however, continue to develop in cooperation with national programs approaches aimed at producing material adapted to specific ecological conditions and problems. The establishment of larger data processing facilities and of the regional services should permit the development of this trend which TAC considers also important for the training of national personnel engaged in local adaptation work.

35. TAC also agrees with CIMMYT that differences among genotypes are best shown up at a high level of inputs and other optimal conditions.

it is recognized that the best lines selected under these conditions may  
be better than others in more marginal environments and manage-  
ment and at low levels of inputs. However, as these marginal conditions  
will still prevail for some time in a number of countries, CIMMYT should  
study this problem more closely, partly in the context of its outreach  
programs and of its training activities and report on this study to TAC  
at a future meeting.

36. The additional mission carried out in Tunisia and Egypt has  
confirmed that the training programs of CIMMYT have proved to be particularly  
efficient and useful, especially with respect to technicians and medium level  
research workers. TAC noted with satisfaction that an increasing number  
of post doctoral fellows from developing countries will be trained at CIMMYT.  
TAC recognized that CIMMYT has used post doctoral training for building-up its  
own staff and this has some benefits. However, TAC noted, that, with time,  
an increasing number of research workers from developing countries will have  
the opportunity of receiving advanced training and periodic refresher courses  
at CIMMYT while remaining attached to their national programs. They should  
thus be able to contribute further to training in their own countries. TAC  
has also noted, as an interesting suggestion the Panel proposal to ensure  
the training of production agronomists in several crops (instead of cereals  
only) by involving other centres along with CIMMYT. It recommended that this  
proposal be further considered at a forthcoming meeting with Centres Directors.

37. TAC was aware of the fact that CIMMYT seems to have reached a  
plateau as far as the yielding capacity of its wheat material is concerned.

the importance of the evidence being provided by CIMMYT on yield stability of maize. It also fully endorsed the changes made to its maize program in 1972, and recognized the quality of the results obtained. Further advances in the yielding capacities of wheat and of maize, in particular in tropical regions will call for a special effort in basic research in plant physiology and in plant pathology. Consequently, the Committee felt that CIMMYT's own supporting sciences may not be sufficiently strong and that its capacity should be strengthened. This would also enable it to make more effective the collaborative research with advanced institutions.

38. TAC reiterated its support to the cooperative programme of CIMMYT and to the assistance it gives to selected national research programs in its outreach activities. TAC supports the view of the Panel that CIMMYT should further define its criteria for the pursuance of these activities at national level.

39. TAC also endorsed the recommendation of the Panel that CIMMYT should proceed with the establishment of its regional services as part of its core program. These regional services could have three functions. The first and most important being to facilitate the implementation of the international nursery trials programme of CIMMYT and the feedback to El Batan of reliable data. The second should be to stimulate national programs facilitating regional cooperation between them and identifying problems which lend themselves to research at international level. The third should be to maintain advisory services on the use of CIMMYT material and provide minimal support and continued back stopping of CIMMYT trained staff in those national programs where CIMMYT projects have been phased out. In addition TAC underlined the importance

of clearly defined scientific programs linked with regional services which should not function as mere relay offices between CIMMYT headquarters and country programmes.

40. The Panel was impressed by the level of sophistication reached by CIMMYT in terms of logistics and operational management of its programs which involve complex sequences of breeding activities extending over several years and in many different sites in Mexico and abroad. It felt, however, that the Review would have been greatly facilitated by the consideration of a statement of objectives and priorities of the Centre at present and for the next five years in the form of a quinquennial program. TAC supports this view which is in line with the recommendations of the CGIAR Review Committee. It also agrees with the Panel that the economics program of CIMMYT should not only serve to identify constraints in the development and adoption of HYV and related improved technologies. It should assist the management in defining its long term priorities in planning and in the future development of its programs of assistance to individual countries.

41. TAC also concurs with the Panel's recommendation to maintain durum wheat as a major activity of CIMMYT in view of its essential links with the work on bread wheat and triticale.

42. TAC also reiterates its recommendation to the Board of Trustees of ICARDA and CIMMYT to develop a cooperative agreement on barley whereby CIMMYT could at least retain a major involvement in barley research in the highlands of Latin America.

43. TAC has properly given considerable rise to the consideration of this very important biennial review. TAC has appreciated the work of the Panel which has greatly contributed to TAC's own thinking on several important matters going beyond the immediate program and policies of CIMMYT.

44. Both the Review Panel and TAC are in full agreement in recording the sense of highly significant achievement at CIMMYT and the considerable promise of more to come. The CG can rest assured in this judgement. Both the Panel and TAC have made observations which indicate modest changes in emphasis and probably in disposition of resources over the next few years which should, we believe, be considered by the CIMMYT Board and the Centre's senior staff. TAC would be ready, within any total constraints on funds laid down by the CG, to consider the modest staffing and capital changes that some of the proposals may imply.

45. With the above comments and recommendations TAC endorsed the report of the PANEL and its supplement and commends it for consideration by the CGIAR.

Resolution (Agenda Item No. 10)

46. In recognizing the need for the Committee to reach a decision on this subject the Chairman sought members' views as to whether TAC wished to re-examine its position and to make a judgment and recommendation on the basis of the data provided from many sources.

47. It was believed that much of the ongoing work in this field contributed to the earlier proposals of the Committee. TAC had earlier noted that the FAO/UNDP Regional Aquaculture Program came close to fulfilling the recommendations of the TAC Sub-Committee in Aquaculture.

48. Nevertheless, in the light of numerous new developments, particularly at SEAFDEC in the Philippines, members insisted the Committee to maintain a watching brief and to retain the item on the Committee's agenda, at least for the next meeting, for which reports on progress in the FAO/UNDP regional projects, at SEAFDEC and in India, would be requested.

Farming Systems Research (Agenda Item No. 11)

49. TAC, at its 13th session, had felt it necessary to undertake a comparative analysis of the scope and contents of the farming systems research at the IARC's. This decision had been prompted by the consideration of the proposed programs of work and budgets of some of the Centres for 1977, some of which were planning to increase their involvement in this field while others tended to reduce or even discontinue their farming systems research activities. TAC had therefore decided to establish a working group for a review of ongoing and future programmes of the Centres in this area.

50. Upon discussing the secretariat's proposal for the working group, the group felt the proposal was in line with the recommendation of the CGIAR Review Committee which, if adopted, would call for "critical reviews" of a certain part of the IARC's programmes. The Committee decided to reduce the scope of the review to a limited number of Centres. It would invite the staff of these centres to discuss jointly their approaches and methodologies together with two external consultants. The object would be to clarify the terminology and the criteria which may provide a framework of parameters for the work of the Centres and their cooperation with national programs. The report of this group would then be considered by TAC, hopefully at its next session. TAC would then decide whether a wider meeting on this subject would be desirable in order to assess change in the present programme. On this occasion, the role of the national programme and their links with IARC's in this field could also be discussed in the context of a further clarification of the tasks of the IARC's in farming systems research and in particular their boundaries with extension services.

ICIPE (Agenda Item No. 12)

51. Members noted with satisfaction that the program proposal put forward by the Director-General of ICIPE was based on agreements for cooperative research with the IARC's, two of which had already been finalised. However, the proposal called for a total sum of over \$3 million which was more than \$1 million in excess of the figure mutually assessed during the visit of a joint TAC/CGIAR secretariat team in September 1975. Furthermore the proposal was now based on the concept of a new ICIPE headquarters, the increase in the capital proposal from

\$ 1.1 to 1.5 million resulted from the fact that ICIPE had been informed that no further expansion on its present site on the University of Nairobi can be considered. Recurrent expenditure proposals had risen from an assessed \$ 1 million to \$ 1.9 million, following the development of detailed agreements which called for a greater involvement with Centres' work than was earlier envisaged. Other sources of funding for ICIPE core activities were, however, in sight and did not appear to be conditional on CGIAR support.

52. There was general agreement with the proposals made, including the mechanism suggested for funding, although members would have liked to have seen reference to the collaborative work in Centres own presentation also.

53. Several members referred to the increasing urgency for work on such pests as Brown Plant Hopper of rice, which was reaching dangerous epidemic proportions, and believed the program outlined by ICIPE would enable work on these crucial problems to be stepped up very rapidly.

54. Doubt was expressed, however, regarding the possibilities of support for such a large request, in the light of the CGIAR Review Committee's recommendation to curtail expansion of the CS program. It was considered more advisable to take a phased approach on the basis of agreements being concluded with the IARC's.



ILCA (Annexes from No. 17)

55. At the 13th meeting TAC had some reservations about the program and budget of ILCA for 1977. The program and budget had then been revised and TAC had no difficulty in endorsing the budgeting aspects of the ILCA activities for 1977. After a period of accelerated growth, ILCA has agreed to defer some elements of its capital investment and recruitment programs and to follow more closely the development pattern which had been initially planned. TAC recognized, however, that the plan had underestimated the housing requirements and this had to be remedied. TAC also noted that ILCA will keep to the minimum the costs of its outreach programs in Mali and Ethiopia and of its future cooperation with ILRAD and possibly IITA by limiting its financial contributions to those aspects which actually serve the purposes of its program, leaving to the cooperating institutions the responsibility of supporting those activities which are an integral part of their own programs.

56. TAC had recognized at its 13th session that ILCA had made considerable progress in spite of the difficulties which are inherent to the nature of the program, its logistics and to the local conditions. The more recent developments at ILCA confirmed this view. TAC, however, shared this concern of the Director of ILCA and its senior staff on several issues which have developed as a result of the mandate of the Centre. TAC recognized the difficulty of formulating and implementing an integrated multi-disciplinary program of research on animal production systems in the conditions where data are scarce and many factors are difficult to control. A step-by-step recruitment of the staff also makes it difficult to achieve an optimal

balance in the disciplines to be involved. The considerable documentation assembled so far and the surveys undertaken should, however, enable in the near future to identify the constraints of the systems under study and formulate more specific research programs, and the related requirements for additional staff.

57. TAC therefore felt that the time has now come, as it had initially planned, after two or three years of operation of ILCA, to seek a more precise definition of the methodologies and programs of the Centre. ILCA shares this view and welcomed the decision of TAC to send some of its members for a joint session with its program committee and its Board at their regular meeting in March 1977 to clarify a number of points of its future programs.

58. Several of these points had been identified already by ILCA and TAC. These included in particular the role of modelling and computer techniques in the program of the Centre, the processing of the documentation and data collected, the place of conventional research in range management, animal husbandry and other sectoral activities within an integrated approach to the improvement of animal production systems. Other points raised by TAC were the relationships with other farming systems research, with other IARC's and with national programs, and finally the question of how and when the training programs should be started at ILCA. These and other problems clearly show that the very nature of the mandate of the Centre, e.g. research on production systems, call for a different approach than that followed for the development of other IARC's. TAC therefore felt that it has a particular responsibility in this respect and should now devote more attention to the ILCA program in the coming year and report to the CGIAR on its findings at its next session.

Water for Research (Agenda Item - Unscheduled)

59. The Chairman had informed the meeting that a few donors were interested in the TAC proposal formulated at the 14th session. Reservations had however been expressed due to a lack of a clear identification of research areas and to the uncertainty about the ultimate size of the related financial requirements of the national institutions expected to participate in the second phase of the programme. In fact, a technical consultation had identified a number of research areas and attempted to assign responsibilities among the interested national institutions. These should have been more clearly reflected in the project proposal. The Chairman, however, felt that TAC while re-affirming its long standing conviction on the need for an international effort in this area, may wish to reconsider the procedure recommended at the 13th session for preparing the project and devise a new approach to Phase 1.

60. Resuming its discussions on this subject, TAC confirmed its support to the project proposal. It agreed however that a change of the procedural approach in the first phase may facilitate its funding and implementation; in line with the existing practices, TAC would assume itself the responsibility for assessing in more detail the requirements of the participating institutions in order to formulate a proposal for the establishment and implementation phases of the project with clear indication of their budgetary implications. To this effect, TAC would appoint, with the cooperation of FAO, a consultant who will visit the countries concerned and consult with their national institutions on the requirements of the cooperative program. A revised project proposal would then be considered by TAC and if endorsed, the proposal would be submitted to the CGIAR, and through the CG to interested donors.

Progress reports and future activities (Agenda Item 16)

(a) Centers Quinquennial Reviews. (CIP, CIAT, IITA)

61. The committee was informed that the Quinquennial Review of CIP was scheduled for 6-18 December 1976. The Review Panel had been selected jointly by TAC and the Center. The team leader, the Director General of CIP, and the TAC Secretariat had met on 23-24 September and agreed on the program of the review and a series of questions to be addressed by the Review Team. The programs, the list of questions, and the relevant documentation were being circulated to the Review members. A series of off-campus visits had been organized concurrently for the team leader and some other members of the Review Team prior to the mission to CIP Headquarters. Those visits covered some of the regional activities of CIP and also core research work conducted in advanced institutions.

62. Similar arrangements were being planned for the Quinquennial Review of CIAT expected to take place in late April 1976 and for that of IITA later in autumn, 1977, the timing of which still was to be decided in the context of the schedule of CGIAR meetings.

63. TAC expressed its satisfaction about the increasing cooperation which was developing with the Centers for a more thorough preparation for the Quinquennial Reviews. It stressed the importance for the Centers of preparing for consideration by the Review Teams a statement of the Center's objectives and an outline of programs for the next five years as recommended by the CGIAR Review Committee.

(b) Vegetable research project formulation mission.

64. TAC was informed by the Secretariat that, in line with its recommendation at the 13th session, two consultants had been recruited and were going

to start a series of visits to a number of countries in Asia and Africa. The consultants will ascertain the interest of national and regional research institutions (including relevant IARCs) in a small scale international vegetable research project. The project would be based on two pilot sites at existing institutions and the priority vegetables as defined by an earlier TAC mission. The project formulation was due to be completed by mid-December, and its results would be reported to TAC at its next session.

(c) Coconut Research.

65. In addition to the International Symposium on Coconut Research convened by the Indian Council of Agricultural Research in Kasaragod, Kerala, India, by the end of December 1976, IBPGR was intended to convene an advisory committee on coconut genetic resources possibly in early 1977. TAC decided to wait for the outcome of both meetings prior to considering the need for further international support to research in this field. It was decided that TAC should be represented at these meetings preferably by one of its members. It was also confirmed that, as recommended at its 13th session, TAC would facilitate a broader attendance of the Symposium, as far as the TAC budget would permit.

(d) CARIS.

66. FAO had requested a one year extension of the duration of the Global CARIS Project the completion of which was initially planned for the end of 1976. The Chairman informed the committee that he had confirmed to the CGIAR his support for this request on two conditions. The first was that the funds requested would not exceed those initially indicated in the budget of the project and would be used exclusively for the activities approved in the original project submission. The second condition was that after the completion of this

project FAO would absorb CARIS within its own programs and ensure its follow-up. Having received FAO's confirmation that these conditions would be met, the CGIAR was, in principle, ready to support the extension of the project and fulfill the pledges required. Before doing so, however, the CGIAR wanted to have confirmation by TAC that its recommendations on the scope and execution of the CARIS project had been implemented.

67. In line with this request, TAC had considered a brief progress report by FAO and samples of the data collected by the project. It was confirmed that the CARIS project was essentially concerned with data collection on research programs and not on individual research activities and projects, and that appropriate linkages and compatibility had been established with other data information systems, AGRIS in particular. TAC, therefore, agreed to recommend to the CGIAR the approval of the extension and funds requested for the completion of the project.

(e) Directory of CGIAR members' activities in support of agricultural research in developing countries.

68. TAC had been requested by the CGIAR in 1974 to study the feasibility of publishing a directory listing the assistance activities of its members in support of agricultural research in developing countries so as to provide a comprehensive and ready reference for the benefit of CGIAR members, developing countries, IARC's, TAC, UN programs and agencies, and other interested parties. The feasibility study had been completed by the TAC Secretariat; and a proposal was put before the Committee including a description of the data system, the data sheet, and a cost estimate.

69. After discussion, TAC agreed to recommend this proposal for consideration by the CGIAR. It stressed, however, that the usefulness of this

understanding would very much depend on the willingness of all the CGIAR members to participate and provide the required information. The need for a continuous updating of the data collected was also emphasized. This implied an unanimous decision by the CGIAR members to devote time and resources on a long term, continuing basis to feed the necessary information and data. The preparation of the directory would have to be considered as a first step only towards the establishment of a continuously updated data base for a question and answer service. TAC also agreed with the proposal that the directory should be linked and made compatible with CARIS.

70. In the event that the proposal would be supported, in principle, by the CGIAR, the Chairman would recommend that the two Secretariats further discuss the ways and the means required for its implementation.

(f) Other matters.

71. TAC was also informed of recent developments in the field of post harvest technology and forestry research -- agro-forestry in particular. It also briefly considered the need for further assessment of requirements regarding oilseed research and for feedback mechanisms between national research programs and the IARC's. It was agreed to keep these matters under review at the forthcoming meetings.

Date and place of next meeting (Agenda Item 17)

72. It was agreed that the next meeting of TAC would be held in Rome at FAO Headquarters from 31 January to 4 February 1977.

October 29, 1976

Tentative Schedule for CGIAR Secretariats Cooperation: December 76 - July 77

December 76

5 - 11 (6-18) )  
 12 - 18 ) CIP Mission  
 19 - 25 )  
 26 - 31 (28-31) Coconut conference, India

January 77

2 - 8  
 9 - 15  
 16 - 22  
 23 - 29  
 30 - )

February

- 5 )  
 6 - 12 )  
 13 - 19 )  
 20 - 26 )  
 27 - )

) TAC meeting, Rome  
 B. N. Webster?

TAC/CG Secretariats to  
 ascertain schedule of  
 visits to Centers.

IRRI (Griffith)  
 IITA-WARDA (Griffith, Hayman, Coulter?)

March

- 5  
 6 - 12  
 13 - 19  
 20 - 26  
 27

(16-22) ILCA mission (PJM)

ILCA-ILRAD (Hayman, Griffith, Feldstein)

ICRISAT? (Ritchie)

April

- 2  
 3 - 9  
 10 - 16  
 17 - 23  
 24 - 30

) CIMMYT?  
 ) CIAT mission. PJM, Coulter

Draft comments on PWB's

Coulter/PJM to discuss draft  
 comments PJM to stop over  
 Washington on way back to  
 Rome?

May

1 - 7  
 8 - 14



May continued

15 - 21  
22 - 28  
29 -

June

- 4  
5 - 11  
12 - 18  
19 - 25  
26 -

July

- 2  
3 - 9  
11 - 16

)  
)  
)  
)  
)

TAC meeting

CIAT Discussion with Center Directors

PJM/BNW in Washington after  
TAC meeting to finalize comments?

Integrative Report  
PJM or BNW to come to  
Washington as required

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

1818 H St., N.W. Washington, D.C. 20433 U.S.A.  
Telephone (Area Code 202) 477-3592  
Cable Address -- INTBAFRAD

CO--SPONSORS MEETING

4:00 p.m. Tuesday, October 26, 1976

Provisional Agenda

1. TAC membership - Status report.
2. TAC budget - funds required and likely to be available for 1977.
3. Responsibilities of the Secretariats (Recommendation 21 of Review Committee Report).
4. Other business.
5. Time and place of next meeting.

CGIAR Secretariat  
October 14, 1976

Distribution:

FAO (Dr. Kimmel)  
UNDP (Mr. Mashler)  
IBRD (Mr. Baum, Mr. Yudelman)  
Sir John Crawford  
Mr. Mahler  
Mr. Yriart

CGIAR

INCOMING TELEX From Rome

sd

TAC  
J-2  
Distribution:

Sept. 22, 76

Mr. Lejeune

FAOG4362 FOR LEJEUNE RE INTERCENTER PRIORITIES ON AGENDA  
14TH TAC MEETING SO FAR ONLY IRRI SUBMISSION RECEIVED  
STOP GRATEFUL YOU PROVIDE THROUGH YOUR REPRESENTATIVE  
AT MEETING INFORMATION RECEIVED FROM OTHER IARCS AND YOUR  
SECRETARIAT PROPOSALS TO ACCOMMODATE SHORTFALL IF ANY STOP  
MY CABLES 20/5 17/6 AND YOUR CABLE 23/6 REFER STOP REGARDS  
MAHLER +

SEP 22 1 39 PM 1976  
COMMUNICATIONS SECTION

RECEIVED

FOR  
YOUR  
INFORMATION



Further to our telephone conversation this morning, I attach a copy of Dr. Bommer's cable for your file.

D.C. Kimmel *BCK*  
*mel*  
Liaison Office for North America  
1325 C Street, Southwest  
Washington, D. C. 20437

DR/m LK

F-2

Sept. 15, 1976

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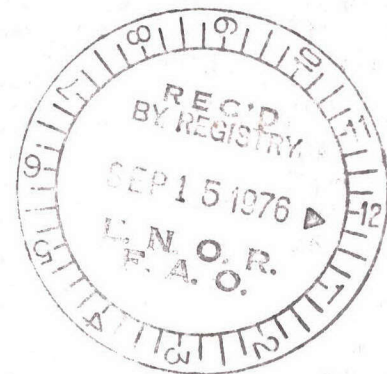
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XL

FOR KIMMEL RE TAC PROPOSAL WATER BUFFALO PROJECT GRATEFUL YOU  
ENQUIRE FROM CG SECRETARIAT ON EXPECTED ATTENDANCE INFORMAL  
MEETING INTERESTED DONORS 25 OCTOBER AND WHETHER ADVISABLE FAO/AG  
REPRESENTATIVE PRESENT TO ANSWER TECHNICAL QUERIES;  
BOMMER "



ORIG. 1

CC:

REGISTRY (2)

C.F.

THIS COPY FOR

ML  
F-2

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
TECHNICAL ADVISORY COMMITTEE

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Via delle Terme di Caracalla, 00100 Rome, Italy  
Cables: FOODAGRI ROME - Telex: 61181 FOODAGRI  
Telephone: 5797

July 4, 1975

TO: Members of the Technical Advisory Committee  
Members of the Consultative Group on International Agricultural  
Research

FROM: The Executive Secretary, TAC

SUBJECT: Tenth Meeting of the Technical Advisory Committee, World Bank  
Headquarters, Washington, D.C., 22-26 July, 1975.

Further to my memorandum of June 27, 1975, please find attached the  
following documentation for the above meeting:

i) Agenda Item 4

Report of the TAC Mission to Review the Agricultural Engineering  
Programme of the International Rice Research Institute (IRRI)  
DDDR:IAR/75/19 RESTRICTED

Report of Visits to Philippines, Thailand, Indonesia, Singapore,  
India, 24 April - 14 May, 1975, by P. A. Oram, Executive Secretary,  
TAC (Members Only) DDDR:IAR/75/21

ii) Agenda Item 7

Application of Satellite Sensing to Agricultural Research and  
Development (Background Paper) DDDR:IAR/75/19 RESTRICTED.

Attachments

248423 WORLDBANK

INCOMING TELEX

CANBERRA

PAS

SOPAC AA62694  
(telex no.)

JUNE 29, 1976

1976 JUN 29 AM 9:43

DISTRIBUTION: MR. LE JEUNE

*File F-2*

ATT LEJEUNE

(1) HAVE TELEXED MAHLER AS FOLLOWS QUOTE (A) CONGRATULATIONS QUICK PRODUCTION PROCEEDINGS AND CONCLUSIONS 12EEEEEE 13TH MEETING TAC AND AGREE CIRCULATION TO CG MEMBERS WITH NOTE TAT THESE HAVE NOT YET BEEN SEEN BY ME OR SWAMINATHAN. ASSUME 12TH MEETING HAS ALREADY BEEN DISTRIBUTED. (B) NOT TAC PRACTICE TO SELECT SPECIFIC PROPOSALS FOR SPEEE SEPARATE CIRCULATION IN AFEEE DEEEE ADVANCE MY REPORT TO JULY CG MEETING. CONSIDER IT SUFFICIENT CG MEMBERS HAVE PROCEEDINGS 13TH MEETING WHICH INCLUDES WATER BUFFALOWS AND THEREFORE DOCUMENTS ATTACHED YOUR LETTER TO LEJEUNE 14 JUNE SHOULD NOT BE DISTRIBUTED AS SEPARTE ITEM. HOWEVER NO OBJECTION DISTRIBUTION WITH PROCEEDINS REPORT EXPERT CONSULTATION WHICH WAS BASIS TAC CONSIDERATION AT MANILA. REMAIN SYMPATHETIC REGIONAL APPROACH BUFFALOES ALTHOUGH UNCONVINCED AS YET NEED IMMEDIATE PERMANENT APPOINTMENT PERSONNEL OF COORDINATING UNIT OR COSTS TOTALLING B232,000. BELIEVE APPRAISAL THIS PROJECT COULD BE DONE BY TAC SECRETARIAT WITH APPROPRIATE REFERENCE TO FAO DIVISION AND CG SECRETARIAT. FINAL STEP TO ESTABLISH REGIONAL ACTIVITY IS OR SHOULD BE DEPENDENT ON THIS APPRAISAL. NATURALLY WISH DISCUSS THIS MATTER WITH YOU WHEN WE MEET IN WASHINGTON. PRIORITY WATER BUFFALOES IN RELATION OTHER ACTIVITIES CANNOT BE OBEEE OVERLOOKED AND EYE SHALL REPORT TO CG THAT THIS HAS

*attached*

*Bus  
H 500*

AS YET BEEN UNRESOLVED BUT WILL BE DISCUSSED AT OCTOBER MEETING TAC.

(C) ON PRIORITIES FINANCIAL GEE GAP POSSIBLY NOT AS WIDE AS THOUGHT  
AT MAY MEETING NEVERTHE LESS REMAIN CONCERNED LEST TAC SHOULD BE  
APPROVING WITHOUT QUALIFICATION CENTRE EXPENSIONS WHICH HAVE  
INHERENT IN THEM EEEE THEM FURTHER EXPENSION IN YEARS AHEAD. |||  
YOU AND EYE SHOULD EXAMINE THIS WITH CG SECRETARIAT PRIOR TO CG  
MEETING POSSIBLY DURING CENTRES WEEK.

UNQUOTE

(2) RE YOUR TELEX JUNE 22 ON PRIORITIES, EVEN IF CENTRE INTERNAL  
PRIORITIES NOT AVAILABLE BEFORE MEETING IMPORTANT THAT CENTRE  
DIRECTIONS AEEEE ARE DURING THEIR MEETING CENTRES WEEK AWARE THAT  
PRIORITY QUESTIONS PUT TO THEM BY TAC IN MANILA ARE IMPORTANT FOR  
FUTURE CG PURPOSES IF NOT ALREADY IN THIS YEAR. THEY SHOULD REALISE  
THAT TAC WILL PREPARE IF REQUIRED MORE CONSIDERED VIEWS PROPOSED  
CENTRE EXPENSIONS AT ITS OCTOBER MEETING AND EYE SHALL MAKE THIS  
POINT IN MY REPORT TO CG. ON QUESTION ADVICE FROM TAC ON CRITERIA  
TO MEET POSSIBLE SHORTFALLEEEEE SHORTFUNDING AND PRIOTITIES WITH IN  
CENTRE PROGRAMMES PROPOSE WE DISCUSS THIS IN WASHINGTON IN LIGHT  
FINANCIAL GAP WHICH EMERGES IN JULY AND ALSO SEEK ASSISTANCE  
CGIAR REVIEW TEAM IN THIS DISCUSSION. HEEE MAHLER INFORMED OF  
ABOVE.

REGARDS CRAWFORD

⊕

248423 WORLDBANKO



CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
TECHNICAL ADVISORY COMMITTEE

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Via delle Terme di Caracalla, 00100 Rome, Italy  
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Telephone: 5797

PR 3/10.13  
PR 3/13.6

14th June, 1976

Dear Mr. Lejeune,

As you will know from John Coulter and Dan Ritchie the TAC at its 13th Meeting finalised a proposal for an International Buffalo Research Project based on the recommendations of its Expert Consultation on the subject. A copy of this proposal, and an extract from the summary of the discussions of the TAC (which it is intended should accompany the proposal to CGIAR members) is enclosed hrewith.

The TAC was quite firm that, notwithstanding the stated current shortfall between existing Centres' financial requirements and donors' preliminary indications of support, it would wish this proposal to be presented. In other words the Committee members gave high priority to the proposal and, whilst not wishing to jeopardize ongoing work at the Centres indicated they would be prepared to re-examine the question of the priority to be accorded to new or expanded work at the Centres at their October meeting.

I should be grateful therefore if you would submit this proposal to CGIAR members for the forthcoming session in July. We would also appreciate it if you could undertake the copying and distribution of these documents, along with your other document distribution, in order to maintain the proper channels of communication with CGIAR members and to minimize delay.

It is my understanding from the statement of the FAO representative at the last TAC meeting that the Organization would view favourably a request in due course to act as executing agency for this project.

Referring to our telephone conversation of 10 June we shall continue to endeavour to have the complete TAC report ready by the end of June, but will certainly send you the text of the Chairman's summing-up as soon as possible, and the comments on individual Centres' programmes as these are completed.

Yours sincerely,

*P.J. Mahler*  
P.J. Mahler A.O.D.  
Executive Secretary  
Technical Advisory Committee

Mr. Michael L. Lejeune  
Executive Secretary  
Consultative Group on International  
Agricultural Research  
1818 H Street, N.W.  
Washington, D.C. 20433  
U.S.A.

*Not done per Crawford's specific instructions on the phone to "sit on it" until he has communicated with Mahler (see Crawford's case of June 29).*

A TAC PROPOSAL FOR  
AN INTERNATIONAL COOPERATIVE BUFFALO RESEARCH PROJECT

The domestic water buffalo population of the world, which numbers about 150 million, constitutes a major source of farm power, milk and meat; that in spite of its great importance to the overall economy of many Asian, Far East and Near East countries, no major effort has been made to increase farm level output from the buffalo through programmes of improved feeding, management and the conservation and use of selected superior germ plasm. It is considered that many of the biological and socio-economic problems limiting the efficiency of production and utilization of the buffalo require careful and intensive research.

This project proposal is presented as an alternative to the original proposals for establishing an international buffalo research and training centre to achieve the same purpose. As such, although the magnitude of the investment requirements may be about the same, this proposal would have the advantage of moving the programme at a faster rate and at the same time build the necessary infrastructure for institutionalizing buffalo development schemes by strengthening basic national buffalo research capabilities and maximizing advances in the use of the technology that may be developed.

Objectives of the Project

Long-term objectives

The long-term objectives of the project are to assist the governments of the developing countries in which buffaloes have a potentially important role in agriculture, to strengthen their national buffalo research and development programmes and to establish cooperative arrangements between research institutions and organizations in the different countries, so as to improve their efficiency in the utilization of scarce research resources and in the implementation of research results.

In particular, the project will:

1. Build the necessary infrastructure for an international buffalo research and development programme by strengthening the basic national research capabilities and maximizing advances in technology developed on an international level.
2. Establish a linkage mechanism that would meaningfully weld the national research programmes together in an international network for buffalo development; and thereby

.../...

- (3) Improve buffalo production and utilization so that large numbers of the farming population of the developing countries in Asia and the Near East could benefit through improvement of agro-livestock production, increased income and better nutrition.

Immediate objectives.

1. To catalyze effectively the establishment and strengthening of national buffalo research and development programmes.
2. To stimulate new/continuing in-depth assessment of the national buffalo development programmes in the countries concerned, including the identification of benchmark information, developmental constraints, and evolving/updating relevant strategies for national buffalo research and development.
3. To utilize the existing resources and capabilities in some of the countries involved and utilize them for research and research training activities which would have implications in several of the countries included in the project, for example, along the following lines:
  - Egypt - nutrition studies (meat type)
  - India - dairy production
    - germ plasm conservation and resource development
    - reproductive physiology and artificial insemination (dairy)
  - Pakistan - nutrition (dairy)
  - Philippines - meat production technology
  - Thailand - reproductive physiology and artificial insemination (meat-type)
    - germ plasm resource conservation and development (meat-type)
  - Sri Lanka - buffalo diseases, including reproductive diseases.
4. To establish a sustained national documentation programme on the buffalo in each of the countries involved and feed the information into an international buffalo documentation centre which will be established as a repository of information on the buffalo and which would be responsible for dissemination of such information to all interested countries.

.../. ..

5. To develop an effective mechanism for interaction between research institutions at the country and international levels; this would involve inter alia the establishment of research cooperation between institutions active in research on specific subjects with a view to tackling related problems in a concerted manner, by organizing the exchange of information on recent research findings, exchanging staff and consultants, and organizing workshops and seminars on topics of common interest to participating institutions.
6. To establish an international coordinating unit for the project which would develop and implement an effective mechanism for coordinating an international buffalo **research** development programme.

#### Institutional Framework

The project shall operate under the basic concept of injecting self-reliance in the various country development schemes. Thus, the project shall operate through the appropriate Ministry of the countries concerned. In so doing, the Government of each participating country shall establish a national buffalo research and development centre, or simply identify an existing institution to serve as such and designate a national research coordinator to liaise with the project.

Buffalo research capabilities are not equally developed in all countries. A few countries, such as Egypt, India, Philippines, Pakistan, Thailand and Sri Lanka, which have developed some relatively advanced capabilities in certain key areas of buffalo production, will be asked to take on added responsibility in the initial stages, for intercountry cooperation in research and research training.

The project shall be organized through a flexible framework of cooperating national institutions and with a small coordinating unit.

There would be a national buffalo **research** coordinator in each cooperating country, who would be the national focal point for international cooperation. The project would be headed by a small international coordinating unit assisted by a Project Programme Committee consisting of four members to be nominated by the Chairman of TAC and by FAO.

It was considered that the proposed machinery would permit of a high degree of autonomy in the research organization without alienating it from development, and bearing in mind that national research programmes should serve national development. It was agreed that activities and funding should be in accordance with capabilities, and all activities should be thoroughly reviewed annually.

Considering that the project would involve the channeling of funds to research programmes in a number of different countries, the arranging of workshops and seminars with participants from several national institutes, the use of consultants, and the services of a project director to guide the effective utilization of international inputs into the national buffalo research programmes, and recognizing that the necessary agreements already existed between FAO and the governments concerned for executing projects of this nature, it is recommended that the project should be executed through FAO. It is further suggested that FAO consider making full use of the mechanism provided by its Regional Animal Production and Health Commission for Asia, the Far East and the Southwest Pacific (RAPHCAP) in the implementation of the Project. It was felt that through this mechanism the participating national institutions could ensure that the project would respond to their needs for buffalo research and development.

The international cooperative buffalo research project proposed here could initially involve seven countries (Egypt, India, Indonesia, Pakistan, Philippines, Sri Lanka and Thailand) which collectively have some 70 percent of the world's buffalo population. However, as the project develops, additional countries may be brought into the programme of cooperation. For research training the project would also be open from the beginning to selected participants from other countries with sizeable buffalo populations.

It is proposed that the support to the International Cooperative Buffalo Research Project (ICBRP) be phased as follows: a preparatory phase in year 1, and an establishment phase in years 2 and 3. It should be stressed that the proposed budget for the establishment phase is purely indicative and would be refined during the preparatory phase. In year 3, a review mission should be mounted to take stock of the progress made and to develop concrete plans of action on a longer term basis.

International Cooperative Buffalo Research Project

PROPOSED BUDGET FOR PREPARATORY PHASE (Year 1)

Total US\$

1. Coordinating Unit

a) Personal

Project Director (12 mm)	55,200
Production Planning Specialist (6 mm)	25,200
1 secretary (12 mm)	<u>15,000</u>

95,400

b) Operating costs

40,000

c) Travel expenses

30,000

Sub-total

165,400

2. Programme Planning

Meetings

30,000

3. International Buffalo Documentation Centre

25,000

4. Consultancies ( 3 mm)

12,000

Total .....

\$232,400

=====

International Cooperative Buffalo Research Project

(Proposed Budget in U.S. Dollars)

	1977	1978*	1979*	1980*
	<u>Year</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4 - Year N</u>
	Preparatory phase	(Establishment phase)		(Implementation Phase)
<b>I. <u>Centrally organized</u></b>				
1. Coordinating Unit	(165,400)			
2. Programme planning	( 30,000)			
3. International workshops	-			
4. International Buffalo Documentation Centre	( 25,000)			
5. Fellowships				
6. Review Mission				
Sub-total	<u>(220,400)</u>			
<b>II. <u>Support of national activities</u></b>				
1. Consultants	( 12,000)			
2. Research programme contracts	-			
3. Support to national buffalo documentation programmes	-			
Sub-total	<u>( 12,000)</u>			
<b>TOTAL</b>	<b>(232,400)</b>	<b>1,500,000</b>	<b>1,800,000</b>	<b>2,200,000</b>

\*Tentative calculations.

Water Buffalo Research

It was recalled that two countries of Asia, Philippines and Pakistan, had both proposed to the TAC, and had offered to host, an international centre for water buffalo research. A UNDP/FAO Asian Regional Survey had further confirmed the needs and interests of the countries of the region in this field and had proposed an international cooperative buffalo research programme. TAC had then decided to call an expert consultation on the subject in order to reach some conclusions on research needs and ways in which these could be met.

The consultation, held in March, 1976, recommended that an international effort be made to strengthen water buffalo research through the establishment of a cooperative network of national programmes. Within this network, some participating national institutions with relatively advanced expertise could be assigned regional responsibilities for leading the joint research efforts in specific programme areas. The network could be guided either by an international board or a steering committee, including representatives of the national and international institutions involved. A coordinating unit and a documentation centre would service the network. It was proposed to locate the coordinating unit in Bangkok, Thailand and the documentation centre in SEARCA, Los Baños, Philippines.

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While **confirming** the need for an international effort for water buffalo research, TAC made the following specific comments on the proposal:

- 1) The scope of the international effort could be viewed either as that of an international coordinating unit servicing a research network of national programmes or that of a decentralized institute. For the time being, TAC proposed a step-by-step approach starting with a preparatory phase for one year during which time the detailed



plans for wider scale operations will be proposed. The preparatory phase would also permit the Committee to strengthen or adjust its viewpoint on future operations.

- 2) The type of research carried out through the network should be production-oriented and should take due account of the actual capabilities and development needs of the national institutions involved.
- 3) Close coordination should be ensured both within the network and outside it, in particular with several international centres, particularly ILCA, and with programmes such as the Agricultural Information Bank of Asia operated by SEARCA in liaison with the AGRIS Programme of FAO.
- 4) Concern was expressed about the possible risk of dispersion of activities in a cooperative network involving several national institutions. The proposed scheme would, however, have the advantage of maintaining close links between research and national development programmes, providing that the development plans of the countries concerned, and especially their objectives, were further examined during the elaboration of the cooperative programme, by a Programme Committee. TAC felt that this would be a more appropriate mechanism than an international board.
- 5) Donors might wish, in a second phase, to provide direct bilateral assistance to the national programmes involved, as part of the larger support needed. The budget for the second phase is thus purely indicative.

TAC recommends to the CGIAR that an International Cooperative Buffalo Research Project (ICBRP) be established as follows:

- (1) The proposed ICBRP would be as described in the project document.
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- (3) The International Coordinating Unit would be located in Bangkok, Thailand.
- (4) In preparing the Plan of Operations of the Project, the International Coordinating Unit should be assisted by a Programme Committee consisting of 4 members to be nominated by the Chairman of TAC and by FAO.
- (5) The International Buffalo Documentation Centre would be integrated with the Agricultural Information Bank of Asia (AIBA) which is operated by SEARCA (Los Baños, Philippines) and which is currently linked up with the AGRIS network of FAO.
- (6) FAO should be approached regarding its willingness to act as Executing Agency in respect of the Project. It is further suggested that FAO be asked to consider making full use of the mechanism provided by its Regional Animal

Production and Health Commission for Asia, the Far East, and the Southwest Pacific (RAPHCAP) in the implementation of the Project.

(7) It is proposed that the support to the ICBRP be phased as follows: a preparatory phase in year 1, and an establishment phase in years 2 and 3. It should be stressed that the proposed **budget** for the establishment phase is purely indicative and would be prepared in more detail during the preparatory phase. In year 3, a review mission should be mounted to take stock of the progress made and to develop concrete plans of action on a longer-term basis.

(8) The proposed budget for year 1 amounts to \$232,400 and its breakdown is shown in Appendix A, and indicative figures for years 2 and 3 are shown in Appendix B to the project document.

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THE CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
TECHNICAL ADVISORY COMMITTEE

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

of

THE THIRTEENTH MEETING OF THE TECHNICAL ADVISORY COMMITTEE

TAC SECRETARIAT  
FOOD AND AGRICULTURAL ORGANIZATION OF THE UNITED NATIONS

Rome, 1976

W/K0655

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### NOTE

The following summary incorporates the summing up made by the Vice-Chairman, Dr. M. S. Swaminathan, at the close of the 13th TAC Meeting. Part I was presented in draft to the members of the TAC and has been amended to reflect their comments. Part II has been prepared by the Secretariat on the basis of the summing up and the closed session discussions on the Centres' programmes.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Part I. New and Continuing Items

CIMMYT Quinquennial Review (Agenda Item 3)

1. The preliminary draft report of the Quinquennial Review of CIMMYT indicates that the Review Panel has by and large extended support to the basic research strategies and approach of CIMMYT. The accomplishments of CIMMYT in the improvement of bread wheat, durum wheat, Triticale, maize and barley are indeed impressive. The programmes are dynamic and production-oriented. CIMMYT has devoted its attention with single-minded devotion to the improvement of the production of wheat and maize. It has developed the world's largest programme in Triticale and the Panel has recommended that the Triticale programme should become a part of the core activity of CIMMYT. Also, the IBPGR should recognize CIMMYT as the repository of germplasm of Triticale. TAC supports these suggestions.
2. The Panel has recommended that the barley work of CIMMYT should continue and that close linkage should be established with ICARDA after the new institute becomes operational. CIMMYT, however, is not in agreement with the view of the Panel that it should restrict its responsibility as regards barley mainly for the highlands of Latin America, once ICARDA is established. TAC felt that practical ad hoc cooperative arrangements should be negotiated in due course between CIMMYT and ICARDA similar to those already established by CIMMYT with other centres.
3. The Panel did not entirely agree with the major stress laid on breeding cereal varieties for general adaptation in contrast to adaptation to specific agro-ecological conditions. TAC feels, however, that CIMMYT's operational procedures permit national programmes to breed varieties for specific as well as general adaptation. Hence, the differences in viewpoint seem to be more apparent than real. The Panel also considers it desirable that CIMMYT should further intensify research on breeding lines of durum wheat, barley and maize for cultivation under marginal conditions of management.
4. The Panel has suggested the more intense use of trainer's training programmes and the use of postdoctoral fellowships for training research leaders from cooperating countries. TAC is in agreement with these suggestions.
5. Members of TAC desired that the Panel in its final report should give more information on the following aspects:
  - a) the recent research contributions and overall policy of CIMMYT, and in addition, the findings of past review missions;
  - b) the nature of constraints, if any;

- c) quarantine arrangements made to ensure that the extensive seed exchange undertaken by CIMMYT does not lead to the unconscious dispersal of seed-borne pathogens;
- d) its judgement on the adequacy of physiological and socio-economic research;
- e) the relations among international centres such as those between CIMMYT and IITA/CIAT, as well as with national research centres should be spelt out in more detail. CIMMYT and IRRI could develop collaborative arrangements on breeding suitable lines for the rice-wheat rotation which is becoming important in South Asia. The extension tasks of CIMMYT should be described and the degree to which CIMMYT is involved in developmental projects should be indicated.
- f) the conclusions of the report should include the specific recommendations made in the main body of the report in order to leave no ambiguities regarding the views of the Panel.

6. TAC viewed with concern the hardship caused to CIMMYT due to inadequate cash flow. It will again stress upon CGIAR the necessity for ensuring orderly cash flow according to approved budgets so that the Director-General and senior staff of the institute can concentrate on implementing the research and training programmes of the institute effectively.

7. The Panel also supports the principle of CIMMYT's regional services programme. There has, in the past, been some misunderstanding on the purposes and extent of this programme which has, as its principal thrust, the strengthening of CIMMYT's own research and as an important by-product building up national research capacities in collaborating countries. If possible, the TAC would like the Chairman and one or two members of the Review Panel, including the Secretary, to visit one of these programmes in North Africa or in the Middle East to gain firsthand knowledge and to report more fully to the Committee on how these regional services are being planned and implemented.

8. TAC members were invited to send to the TAC Secretariat written comments on the preliminary draft before 30th May.

#### Water Buffalo Research (Agenda Item 4)

9. It was recalled that two countries of Asia, Philippines and Pakistan, had both proposed to the TAC, and had offered to host, an international centre for water buffalo research. A UNDP/FAO Asian Regional Survey had further confirmed the needs and interests of the countries of the region in this field and had proposed an international cooperative buffalo research programme. TAC had then decided to call an expert consultation on the subject in order to reach some conclusions on research needs and ways in which these could be met.

10. The consultation, held in March, 1976, recommended that an international effort be made to strengthen water buffalo research through the establishment of a cooperative network of national programmes. Within this network, some participating national institutions with relatively advanced expertise could be assigned regional responsibilities for leading the joint research efforts in specific programme areas. The network could be guided either by an international board or a steering committee, including representatives of the national and international institutions involved. A coordinating unit and a documentation centre would service the network. It was proposed to locate the coordinating unit in Bangkok, Thailand and the documentation centre in SEARCA, Los Baños, Philippines.

11. The consultation recommended that the project be executed through FAO, and further suggested that FAO consider making full use of the mechanisms provided under its Regional Animal Production & Health Commission for Asia, Far East and Southwest Pacific of the proposed international board of the network, the participating national institutions could ensure that the international network programme would respond to their needs for buffalo research and development.

12. While confirming the need for an international effort for water buffalo research, TAC made the following specific comments on the proposal:

- 1) The scope of the international effort could be viewed either as that of an international coordinating unit servicing a research network of national programmes or that of a decentralized institute. For the time being, TAC proposed a step-by-step approach starting with a preparatory phase for one year during which time the detailed plans for wider scale operations will be proposed. The preparatory phase would also permit the Committee to strengthen or adjust its viewpoint on future operations.
- 2) The type of research carried out through the network should be production-oriented and should take due account of the actual capabilities and development needs of the national institutions involved.
- 3) Close coordination should be ensured both within the network and outside it, in particular with several international centres, particularly ILCA, and with programmes such as the Agricultural Information Bank of Asia operated by SEARCA in liaison with the AGRIS Programme of FAO.
- 4) Concern was expressed about the possible risk of dispersion of activities in a cooperative network involving several national institutions. The proposed scheme would, however, have the advantage of maintaining close links between research and national development programmes, providing that the development plans of the countries concerned, and especially their objectives, were further examined during the elaboration of the cooperative programme, by a Programme Committee. TAC felt that this would be a more appropriate mechanism than an international board.

5) Donors might wish, in a second phase, to provide direct bilateral assistance to the national programmes involved, as part of the larger support needed. The budget for the second phase is thus purely indicative.

13. TAC recommends to the CGIAR that an International Cooperative Buffalo Research Project (ICBRP) be established as follows:

- (1) The proposed ICBRP would be as described in the project document.
- (2) The Project would initially involve seven countries (Egypt, India, Indonesia, Pakistan, Philippines, Sri Lanka, and Thailand) which collectively have some 70 percent of the world's buffalo population. However, as the Project developed additional countries may be brought into the programme of cooperation.
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- (6) FAO should be approached regarding its willingness to act as Executing Agency in respect of the Project. It is further suggested that FAO be asked to consider making full use of the mechanism provided by its Regional Animal Production and Health Commission for Asia, the Far East, and the Southwest Pacific (RAPHCAP) in the implementation of the Project.
- (7) It is proposed that the support to the ICBRP be phased as follows: a preparatory phase in year 1, and an establishment phase in years 2 and 3. It should be stressed that the proposed budget for the establishment phase is purely indicative and would be prepared in more detail during the preparatory phase. In year 3, a review mission should be mounted to take stock of the progress made and to develop concrete plans of action on a longer-term basis.
- (8) The proposed budget for year 1 amounts to \$232,400 and its breakdown is shown in Appendix A, and indicative figures for years 2 and 3 are shown in Appendix B to the project document **attached hereto as Annex I.**

#### Priorities for Research (Agenda Item 5)

14. The revised Priorities paper was generally endorsed by TAC members and was commended for clearly enunciating the views on priorities developed at previous TAC meetings.



In developing its statement on priorities, TAC has kept the following basic considerations in view:

- (1) The highest priority should be accorded to the improvement of food production and availability in the developing countries;
- (2) Priority should be given to research which can increase the purchasing power of landless peasants and marginal and small farmers so that they will be in a position to buy the needed quantities of food;
- (3) Since the funds available for supporting international agricultural research will not be unlimited, TAC's exercise in developing priorities cannot just be a compilation of major research gaps but should be one which is capable of contributing most towards achieving the two objectives listed above within the funds available.

15. Seen in the above context, TAC reiterates that its first priority will go to the improvement of crops and animals which provide most of the calories and proteins in developing countries. For this purpose, cereals, food legumes, and crops giving starchy products like potatoes, cassava, and other tubers should continue to receive priority attention. TAC notes that among legumes, satisfactory arrangements for organizing international agricultural research have been made for all crops except soybean. Similarly, in major starchy products, a crop which may deserve international attention is plantain (banana).

16. Among farm animals, ruminant livestock has received specific attention from TAC, leading to the establishment of ILCA and ILRAD in Africa. TAC has been interested in stimulating research on water buffalo and is now ready to make a specific recommendation to CGIAR. One other farm animal which may deserve closer examination is the goat. Goats are used extensively by poorer people in many developing countries as a source of milk, meat, and fur.

17. Aquaculture technology, leading to increased production of fishes, has also been considered by TAC as a priority area of research. A TAC-sponsored Working Group had given useful recommendations resulting in support being extended to a few projects by some bilateral donors, e.g. IDRC.

18. TAC hopes to make further concrete recommendations to CG at its next meeting.

19. Among future priorities, TAC considers that research on climate-soil-water-plant relationships is important since such research would be essential for promoting the scientific intensification of farming. Another area which will need increasing attention is post-harvest technology, particularly aspects such as drying, storage, and marketing of farm produce by small farmers. Rodent control and other allied aspects of safe storage of grains in rural homes will also have to receive increasing attention, since a match

between production and post-harvest technologies is essential for farmers to derive full benefit from increased production.

20. Among second order priorities, vegetables, tropical fruits, oil seeds, and cotton deserve consideration. Among oil seeds, coconut in particular deserves attention since it is a very important crop both from the food and income points of view in several countries and is at present suffering from some serious disease problems. Farm forestry is also an important area but has not been assigned by TAC a high priority for international research since success in this area will depend to a great extent on the public policies of national governments and the amount of community effort generated for the planting and saving of trees. TAC, however, considers that the collection and conservation of the germplasm of tropical forest tree species is an urgent task and should receive attention.

21. TAC believes that socio-economic research, in particular the analysis of constraints and consequences relating to new technology is an exceedingly important adjunct of biological and technological research. Similarly, research on applied nutrition, micro-analysis of agro-ecological problems, and a study of individual factors of production will be important. This is why TAC has supported the establishment of the International Fertilizer Development Centre and the International Food Policy Research Institute and has been urging the optimum use of the expertise developed at the International Centre for Insect Physiology and Ecology.

22. Another instance where factor-oriented research may be necessary is the improvement of the efficiency of managing irrigation or rainfall water on the farmer's field. Recent studies in soil-plant-water relations suggest that significant water savings can be made (in crop production) through carefully controlled applications of water to the root zone of the plants. Such findings may have great implications for the future development of a highly productive agriculture throughout the world. The TAC has given careful attention in the past to the research needs of improved crop water management. The TAC's earlier reviews pointed to large gains in water use efficiency that can be made by appropriate development investments in the improvement of major and minor national irrigation systems, gains that did not require additional research, merely the application of known technologies. However, the TAC is aware that limitation of crop moisture is often the major factor holding farm yields at low levels. For this reason, it is concerned with worldwide research activities on water as an input to crop production. The Committee pays particular attention to the impact these activities might usefully have for the work of the international centres and the CGIAR. Should the Committee find that new research opens opportunities for further investigations, either at existing international centres or through other institutions, it will not hesitate to commend such work to the CGIAR. For the present, the TAC has urged all international centres to accord water management an important place in their research programmes.

23. One other aspect of factor-oriented research that has received little consideration in the past is the matter of pre-harvest crop losses from large pests such as locusts, birds and rodents. The TAC is aware of the magnitude of these losses, but it has not yet given consideration as to how these losses might be reduced as a consequence of appropriate research. For the time being, IARD's are encouraged to investigate protection from the depredations of pests as part of their general work on plant protection. But such work is often inadequate in relation to the magnitude of the problem. The TAC recognizes that more specific research may have to be undertaken at the international centres or through separate arrangements with specialized institutions such as the International Centre for Insect Physiology and Ecology (ICIPE) in Kenya. In the course of its future work, the TAC will examine this problem in greater depth.

24. While international centres may not themselves undertake basic research, it is important that they stimulate basic research relevant to applied field problems. Also, some proportion of research investment should be devoted to the creation of new technologies for the future. In this respect, research relating to all aspects of production physiology, nitrogen fixation, phosphorus recycling, and non-conventional sources of animal nutrition will have to receive high priority. For this purpose, international centres could stimulate appropriate studies in universities and national research institutions and collaborate with suitable institutions located in both developed and developing countries.

25. While TAC has been concentrating mainly on areas of research which lend themselves to international effort, it is conscious that in order to derive full benefit from international agricultural research, there have to be strong national research and development programmes. TAC hopes that the CGIAR Review Committee would discuss this matter with the CGFPI and develop suitable mechanisms for promoting and supporting national research.

26. Members of TAC suggested the following specific amendments to the Priorities paper:

- (1) The financial annex should be omitted since such projections tend to become out of date very quickly;
- (2) The water management aspect should be expanded within the chapter on factor-oriented research;
- (3) Instead of using the term "lower priorities", "other areas of concern" may be used;<sup>1/</sup>
- (4) Cotton is important but should not be given a high priority. The paragraph related to cotton research should be suitably reworded.

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<sup>1/</sup> As the term "other areas of concern" might lead to some confusion with the subsequent chapter heading vi) "Important fields of research not assigned specific priorities," the term "other priority areas" has been employed by the Secretariat instead, in the first version of the document.

Immediate Tasks for TAC Arising from the Priorities Paper

27. TAC concluded that with the above amendments, the Priorities paper may be sent to CGIAR for distribution at the Centres Week to be held in July. Also arising from TAC's Priorities paper, TAC itself should, either from its own budget or with funds from a suitable bilateral donor, organize Working Groups in the following areas:

- (1) Coconut research with particular reference to the current state of knowledge on major diseases such as "cadang-cadang" and rovt wilt. (Advantage could be taken of a meeting being held in India early next year by providing an appropriate TAC input).
- (2) Research on plantain (banana). This may possibly be done in collaboration with the New Guinea Foundation.
- (3) Goat research for the production of milk, meat and fur.
- (4) A critical discussion on the role of the international centres in farming systems research. (At present IITA, IRRI and ICRISAT spend 38, 21, and 18 percent of their respective core budgets on farming systems research).

28. These Expert Consultations are primarily for the purpose of informing TAC of the current status of research in these areas. They may or may not lead to concrete recommendations by TAC or projects for CGIAR funding.

IRRI Quinquennial Review (Agenda Item 6)

29. Referring to the report of the TAC's Quinquennial Review mission which he had led, the Chairman recorded his gratification that the Committee had unanimously endorsed the final report and had recommended that it be transmitted to the Consultative Group, and given as wide a circulation as may be deemed appropriate.

30. At the twelfth meeting of the Committee, when the report was presented in draft, members had the opportunity to discuss freely the findings of the mission and to record their comments. Reminding members that changes in the substance of the report were the prerogative of mission members, the Chairman pointed out that nevertheless members' comments and requests for clarification of certain points of obscurity and ambiguity could be utilized to advantage in refining the draft. Their comments would be recorded and incorporated in the report of the Committee which would itself of course also be presented to the Consultative Group.

31. Members had made some constructive suggestions for improvement of the test and these had been reviewed by four members of the mission who were fortunately all present

the the last TA meeting. Agreement had been reached by this group on the changes to be made, most of them relatively minor; one of some substance, was the need to assign a priority rating to the recommendation for staff increases and improved facilities. This had been done.

32. The revised draft was then submitted to the mission members for approval and further comments, with a deadline date. Comments and corrections had been received from four members and these, together with those of the TAC members and the Chairman, had been incorporated in the final version.

33. The unanimity with which members recommended the adoption of the report, was praise enough in itself. The Chairman recorded his thanks, as leader of the mission, to the members of the Committee, both for their constructive comments on its redrafting and for their kind remarks in its quality.

#### Vegetable Research (Agenda Item 7)

34. At its last meeting TAC reached the conclusion, on the basis of the report of its Vegetable Research Appraisal Mission, that some form of international research effort was necessary on vegetables used for home consumption by the poor. As a basis for further discussion the TAC Secretariat was asked to prepare a paper giving alternative methods of organizing such research and indicating priorities in the choice of vegetables. After discussions of this paper at this meeting, TAC felt that vegetable research fits into its priorities for improving human nutrition. Hence, TAC recommends the initiation of an International Vegetable Research Project based on the following principles:

1) Vegetables normally eaten by the masses of people in Southeast Asia and Africa (tropical lowlands) contribute greatly to their diet and nutrition and there is little doubt that research and appropriate training can make an important addition to the production and consumption of these vegetables.

2) Taking into consideration the recommendations made by the Vegetable Appraisal Mission, TAC decided to support the general idea to undertake a serious effort but felt that not enough information was on hand at present to enable it to make a final recommendation as to the organizational form, specific activities, definitive location and other important aspects for a permanent programme. TAC, however, was ready to consider supporting a short-term or pilot research project covering a period of from 3 to 5 years which would provide the information that was now lacking.

- 3) It was agreed that the preparation of the project be given to a special mission which would work for a period of 3 to 4 months and subsequently report to TAC by early 1977 with a concrete proposal or alternative proposals. (See Annex II).
- 4) The pilot project to be proposed should contain the following elements:
- a) should be a plan for not more than 5 years;
  - b) the preliminary action should be organized as one coordinated effort although actual work could be conducted in two locations, one in Asia and another in Africa;
  - c) should be considered as an international project, financed by CG but possibly based in one or more existing institutions, either international, regional or national, able to provide the project with the necessary technical and logistic backstopping.
  - d) in the period of the pilot project, work should be initiated on the genetic evaluation and utilization of the main species of vegetable crops chosen for priority attention. Also, appropriate training programmes should be organized. Another purpose of this research project would be the compilation of all available information on vegetable research.

35. TAC expected that by the end of the project, concrete proposals for long-term action would emerge. In addition, it believed that the proposed International Vegetable Research Project would help to extend to other countries the results of work of the Asian Vegetable Research and Development Centre, Taiwan.

#### Grain Legumes and Plant Nutrition (Agenda Item 8)

36. In view of the importance attached by TAC to this subject, it had constituted a Subcommittee to review the progress of international research in improving the productivity of grain legumes and in harnessing all forms of plant nutrients. Arising from the recommendations of the Subcommittee, research programmes were now in progress in nearly all major grain legumes at international centres. Soybean research alone remains to be organized on international lines under the CGIAR system. The TAC Working Group on the Biology of Yield in Grain Legumes, which met in New Delhi in October 1974, had made valuable recommendations on the strategies useful for improving the yield potential of grain legumes and for achieving more efficient biological nitrogen fixation in the soil. TAC had also considered from time to time different aspects of fertilizer technology including the proposal for the formation of the International Fertilizer Development Centre.

37. Conscious of the need for enriching the organic matter content of tropical soils and for conserving all organic wastes for use as manure, TAC had asked its Subcommittee on Plant Nutrition to meet ahead of the 13th meeting of TAC at Los Baños to discuss and make concrete recommendations on the processing, management, and use of organic wastes. Based on the recommendations of the Subcommittee, TAC suggests the following additional steps:

- a) International agricultural research centres may, where this is not already being done, intensify their research on soil organic matter and introduce organic recycling principles and integrated systems of nutrient supply in improving the fertility status of soils.
- b) FAO, in collaboration with other appropriate international agencies, should consider organizing an information service on the technological and economic aspects of organic recycling which could become a means of collecting and disseminating information on methods of processing and use of organic refuse, including human wastes, from urban and rural areas.
- c) TAC was informed of a programme for promoting the use of organic matters as fertilizers, prepared by FAO for support from the United Nations Environment Programme (UNEP). It hopes that this FAO programme will be implemented.

#### Other Business (Agenda Item 9)

##### i. CGIAR Review

38. The Committee was informed by Dr. Mosher of CGIAR Review Team of the methodology adopted by the Team and the progress made to date. It was noted that the Team members were visiting the IARC's and donors in turn to obtain data for a number of questionnaires which had been prepared. One of these questionnaires had been copied to TAC members who were requested to make their replies available, if they so wished, to a meeting of the Review Team on 20 June in Uppsala, Sweden.

39. It was anticipated that following this meeting the preliminary findings of the Team would be prepared for discussion at a Review Committee Meeting, to be held immediately prior to Centres' Week, in the third week of July.

40. The final report of the Review Committee was anticipated to be ready before the October meeting of CGIAR and might thus be available to assist the TAC in its anticipated deliberations on inter-se priorities at its own October meeting.

##### ii. Soybeans

41. An updated account of the work of INTSOY was tabled for the information of members and the representative of FAO gave some details of the Organization's activities in connection with this crop.

42. Time did not permit a major discussion and it was agreed that in-depth consideration, aimed at reaching some conclusions on the alternative proposals discussed at the 12th Meeting of the Committee, would be given during the October meeting of TAC.

43. The Secretariat was requested to seek the assistance of appropriate units in FAO in the preparation of a detailed background paper, including information on national research and development programmes on soybean. Meanwhile the joint arrangements between IITA and INTSOY were commended as an encouraging step towards the establishment of soybean research programmes in the true tropics.

#### iii. Aquaculture

44. Members were supplied with an up-to-date report and recommendations for aquaculture research prepared on behalf of IDRC and with an FAO document prepared for a forthcoming World Conference on Aquaculture.

45. The Committee noted that FAO was planning to seek UNDP support for a number of regional aquaculture centres whose research activities would be based on the needs of member countries of the regions. Research priorities noted to date were very much in line with those originally proposed to TAC by its sub-committee on aquaculture research.

46. The Chairman requested that members be supplied with the earlier TAC documentation on aquaculture prior to the October meeting at which it would figure as a major agenda item. The outcome and recommendations of the forthcoming FAO World Conference could also be expected to provide a major input to the deliberations of the Committee on this occasion.

#### iv. TAC Quinquennial Review of CIP

47. The Chairman reported that an opportunity had been taken to discuss with Dr. Sawyer, Director of CIP, the Terms of Reference and possible composition of the CIP Review Mission. Agreed Terms of Reference were tabled, and approved by the Committee, and the Secretariat was requested to go ahead with preparations for the Mission, planned for the second and third weeks of December.

#### Joint Meeting with Centres' Directors (Agenda Item 10)

48. Centres' Directors and TAC members discussed at length mechanisms for promoting linkages among:

- a) centres themselves,
- b) centres, universities and advanced research institutions in developed and developing countries,
- c) centres and donors, and
- d) centres and national programmes.



The following were the major conclusions arising from this discussion:

- 1) Mutually beneficial relationships are growing among the international centres and between international centres and national programmes. These bonds should continue to be nurtured and strengthened;
- 2) IARC's should continue to develop collaborative research projects with national research systems in developing countries; in particular, a more effective use of "hot spot" locations for major pest and disease screening could be developed in this manner;
- 3) CGIAR should encourage bilateral donors to provide funds directly to advanced research institutions in developing countries for collaborative research and not channel the funds through IARC's;
- 4) IARC's should not assume the role of grant-giving agencies so that they do not lose their essential character of research institutions;
- 5) Communication between IARC's and research institutions in developing countries should not be confined only to a few major institutions but should extend to the many small and active centres found in those countries;
- 6) Training programmes need to be expanded for providing developing countries with more research leaders. While at their headquarters IARC's could concentrate on organizing trainer's training programmes, they could organize other training programmes jointly with national institutions to enlarge the training base. In this respect, the training programmes organized by CIMMYT, jointly with national research systems and bilateral donors on the control of wheat diseases is a good example. TAC was also informed that financial support for training doctoral and postdoctoral candidates is tending to decline. This trend needs to be arrested since the lack of trained manpower is a major obstacle to the development of effective national research systems in several countries.
- 7) IARC's could help bilateral donors in identifying suitable national research institutions which, if given appropriate support, could make a substantial contribution to the improvement of food productivity;
- 8) Centre Directors made the following suggestions concerning Centre-TAC interactions:
  - a) The centres welcome the quinquennial reviews undertaken by TAC but would suggest more advanced planning of the programme of the Review Panels, joint selection of Panel members, and an opportunity to examine the draft report before it is finalized. TAC clarified that it does not look upon the quinquennial review report as an inspection report but more as a joint exercise with centres on reviewing past work and developing broad guidelines for further growth;
  - b) The centres welcome TAC meetings' being held in different centres. This would help to promote better understanding between TAC members and centre personnel. While the 14th meeting of TAC is scheduled to be held at ICRISAT, Hyderabad, India in October 1976, Centre Directors would suggest that the 15th meeting of TAC be held at CIAT, Cali, Colombia towards the end of May 1977 or early June 1977.

The U.S. National Research Council World Food and Nutrition Study - Interim Report  
(Agenda Item 12)

49. TAC fully recognized the importance of this special study of the U.S. National Research Council on the mobilization of the scientific capacity of the United States towards improving the capabilities of all countries to increase food production to combat malnutrition and its effects.

50. TAC members individually provided a wide range of comments valuable to the study steering committee in its further deliberations.

51. They particularly stressed the importance of improving the capability of research personnel in developing countries through providing the proper incentives for the more highly trained scientists and technicians to remain in their country and devote their attention more to specific problems in the agricultural development of their country.

52. Notwithstanding these needs of national research, other members felt that the main gap was in the application of research findings, that is, in the intermediate technology, and consequently there was an urgent need for the technical training of teachers to be sent to the field to train extension officers.

53. Another specific subject which TAC members thought needed more attention was the socio-economic problems related to increasing food production.

54. TAC believed the United States' science and technology was able to make a major contribution to the world food problem through, for example, the application of satellite imagery to global early warning system and for integrated resource surveys, extension of knowledge of the use of solar and wind energy, the provision of more assistance from specialized institutions, the application of the Land Grant College model, and expertise on quarantine procedures and techniques.

Part II. The International Centres

Review of the International Centres' Programmes (Agenda Item 11)

55. According to the budget proposals provided by the Centres to TAC,<sup>1/</sup> the total requirement for 1977 comes to \$63.8 million for core operating funds and \$25.5 million for capital expenditure. The details are as follows:

INSTITUTE	Budget/\$millions			
	1976		1977	
	Core	Capital	Core Operating	Capital
CIAT	6.5	1.0	8.6	1.4
CIMMYT	10.7	0.5	11.2	1.6
CIP	3.2	0.9	4.9	1.2
IITA	8.3	2.5	10.0	1.4
IRRI	7.3	1.3	8.7	3.6
ICRISAT	4.9	3.7	5.9	6.5
ILCA	4.1	1.6	6.3	3.4/(5.4*)
ILRAD	2.1	2.8	2.6	3.0
WARDA	0.8	-	1.1	0.3
IBPGR	1.1	-	1.2	0.07
ICARDA	-	-	3.3	3.0
TOTAL			63.8	25.5

56. TAC was informed by the CG Secretariat that according to current indications, the likely availability of funds for 1977 will be about \$80 million, thus leaving a gap of \$9 million.<sup>1/</sup> Due to the late receipt of Centres' programmes and budgets, TAC could not go into inter-se priorities and is therefore not in a position at this meeting to assign specific priorities to the new initiatives and proposals for 1977. TAC would therefore suggest the following procedure:

\* Working capital + capital for cooperative programmes

<sup>1/</sup> It is understood that these figures may be subject to adjustment, prior to the Centres' Week meeting, following further discussion with the CGIAR Secretariat.

- 1) The CG Secretariat could ensure that Centres would have available during 1977 adequate budgets to cover the cost of current operations together with the amount needed to offset inflation;
- 2) The Centre Directors may themselves undertake a detailed exercise on priorities with reference to new proposals for additional funds and make the result of this exercise available to the TAC Secretariat by July 1976;
- 3) New international centres, which do not have even basic infrastructure for fulfilling their research mandate, should preferably be accorded priority in meeting their capital budget requirements;
- 4) On the basis of a clearer understanding of the availability of funds and the views of CGIAR Review Committee on the determination of inter-se priorities, TAC would be in a position to make concrete recommendations to CGIAR on allocation of funds for each centre at its October meeting.

57. Although it was not possible, as indicated above, for the Committee to assess inter-se priorities among the Centres' programmes, individual programmes were discussed following their presentation by the Directors. The highlights of the ensuing discussions and the Committee's conclusions are presented below.

i. International Rice Research Institute (IRRI)

58. Since IRRI's programme of work for 1977 was by and large in accordance with the recommendations of the Quinquennial Review Mission the only matter discussed in detail was the request for three regional representatives, one at CIAT for Latin America, one in Indonesia for S. Asia and another in the Indian sub-continent. Some members had wondered why this new proposal of IRRI had not been brought explicitly to the notice of the Quinquennial Review Panel. One of TAC's main concerns had been with regard to the security of tenure of the outreach staff of centres; the explanation given by the Director that this concern would be met by the new proposal proved acceptable to TAC and, in terms of IRRI's needs, compatible with the Review Report proposal for three core funded posts for outreach staff.

59. It was recalled that TAC had fully discussed regional services at its 1975 October meeting and had firmly recommended that there should be some regional research staff to ensure feedback to the centre's research programmes. Since it was not feasible to have a centre representative in every country of outreach activity the scientists involved, **therefore, had** to have regional responsibility.

60. With respect to the rice programme staff at CIAT the question was raised as to whether they should be regarded as CIAT staff members working on rice, or as IRRI staff members. The respective directors had indicated that either arrangement would be satisfactory but in TAC's view it was more pertinent that they be considered IRRI staff members

and therefore should be included in the IRRI budget since they provided the direct linkage with IRRI. TAC welcomed as a first step the two centres' proposal to enter a formal agreement in respect of one IRRI staff member of the CIAT rice team, which it was expected to finalize during the current week.

61. It was generally felt that there was a need for further clarification of the problems related to staff at one centre manifestly engaged in the research programme or research in a commodity of another centre. The Chairman felt that in these circumstances a definition of the mandate of each institute could help to decide what items should be included in one or the other centre's budget. Although the review missions, having only time to make a rapid assessment of the overall situation, had not been in a very good position to make recommendations on this aspect of a centre's outreach programme, future review teams should be urged to consider this point as closely as possible. It was agreed that TAC should thoroughly discuss the matter again and that this should form an item on the agenda of the October meeting.

62. The Chairman recorded the Committee's agreement to IRRI's proposal to establish in 1977 three regional services at an estimated cost of \$ 250,000 noting that the Director of IRRI had indicated that this was only the start and that the Centre would be requesting an additional three regional services in following years. These proposals would be examined as they arose.

ii. International Institute of Tropical Agriculture (IITA)

63. The Chairman remarked that TAC had noted with satisfaction that the farming systems research programme, the relative expenditure on which had been a controversial subject in past discussions between TAC and the IITA management, accounting for nearly 40 percent of the 1977 budget, was anticipated to yield beneficial results. TAC hoped that this would have a desirable impact on improving farming systems and increasing agricultural production in other parts of the humid tropics which was the Institute's basic mandate; for this reason TAC accepted the programme proposals.

64. Significant developments at IITA which had reached the stage of field application through the use of kits and mini-kits were the production of (i) cassava clone resistant to the mosaic disease and bacterial blight, and which was being tested in production trials both in Nigeria and Zaire; (ii) a composite maize variety from typical Nigerian varieties; and (iii) varieties of cowpea which have resistance to some of the major insect pests and are now being tested for their nutritional value.

65. Other developments which met with TAC's approval were the land development work in the humid tropical zone station, which was more suitable than Ibadan for truly tropical research, and the collaborative programmes with INTSOY in the case of soybeans and with ICIPE on pest control research. The proposed agreement between IITA, IRRI and WARDA for

collaboration in rice research was welcomed and it was hoped this would soon be finalized. TAC also hoped that the informal linkages that had evolved between IITA and CIAT would be strengthened, particularly towards a closer collaboration in research on cassava and beans, and preferably through the establishment of a formal agreement as with other centres.

66. The Chairman referred to the concern felt by some TAC members about the situation regarding virus diseases. There was a good virus research programme at the national research institute in Ibadan but since virus diseases were very important in the crops handled by IITA the Institute had considered strengthening virus research by the addition of a virus unit as a Special Project. The TAC felt that, at first this should be limited to a virologist in the core programme, if necessary financed through re-alignment of other priorities. It did not consider Special Project financing to be satisfactory for long-term virus work.

67. He referred also to the concern expressed about the expansion of the agricultural engineering sub-programme of the farming systems research programme, since TAC had seen other engineering activities develop into full programmes from special projects. TAC suggests therefore that IITA should not envisage any further expansion after 1977 and that the 1977 level of the programme be regarded as a ceiling.

68. Finally, with regard to the request for \$970,000 of capital, for the provision of eight houses, the Chairman noted that the CG Secretariat was reviewing the entire capital programme and while TAC generally supported IITA's request for this additional staff accommodation in 1977, it would not make any specific recommendations beyond that.

iii. International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

69. TAC was pleased with the progress made in the last four years in respect of the programmes approved by the ICRISAT Board. The Director had indicated that the capital development programme would be completed by the end of 1977, all the necessary building materials having now been assembled on the site. TAC had also been informed that staffing of ICRISAT was proceeding vigorously and that cooperative research programmes with other International Centres and national research institutions, particularly in Africa, were developing well. It was noted that there were some problems of accommodation for staff of the cooperative programme and TAC recommended that bilateral donors might be sought to meet these needs so that they did not form a major impediment towards accomplishment of the research programmes.

70. TAC viewed favourably the development of the cooperative research programmes on legumes of ICRISAT with IITA and some laboratories of Indian universities. It was also pleased with the progress made in research on groundnuts and acknowledged the help rendered by the North Carolina University in the provision of groundnut germplasm. However, recognizing the possibly very serious consequences of the groundnut rosette disease and Striga on sorghum and millets in Africa, TAC recommended that these problems should receive priority attention when ICRISAT's groundnut, sorghum, and millets programmes had become fully operational.

71. TAC fully endorsed the budget proposal by the ICRISAT Board noting that the Centre anticipated completing its first four-year programme within the budget ceiling set by the CGIAR.

iv. The International Potato Centre (CIP)

72. The Chairman noted that the Committee had again commented favourably on the innovative approach of CIP to core research through contracts, which currently accounted for half a million dollars of the core budget.

73. Only one new item was included in the 1977 budget proposals. This resulted from the transfer to core funding of the former Special Project funded research into village level processing. This was fully supported by the Committee, which also noted with satisfaction that the potato storage project was getting under way. Both projects should have a high priority in view of the disappointingly rapid post-harvest deterioration of tubers in some localities, to which TAC had earlier called attention.

74. The heavy regional programme of CIP which imposed a sizeable travel component in the budget, was to a large extent obligatory in view of the need to produce virus-free seed on a regional basis. In this connection the Committee viewed with satisfaction the work on tissue culture transfer which should eventually permit the storage of a large (15,000 entries) collection, and also facilitate clonal dissemination.

75. A further consequence of the regional programmes was the heavy schedule of workshops and seminars which was questioned by some members. It was pointed out that these were necessary in order to establish adequate local contacts at the national level, aimed at the building up of complementary programmes. The concern of the Committee at the amount of staff time tied-up in these activities was reiterated however, and it was decided to ask the forthcoming review team to examine this question and the total role of regional research staff in relation to the main scientific programme and objectives of the Centre.

76. With the above comments the Programme and Budget for 1977 were approved. Future projections, which appeared rather high, would be referred to the Quinquennial Review Mission for comment.

v. West Africa Rice Development Association (WARDA)

77. TAC members expressed their pleasure at the way in which WARDA was developing in view of its uniqueness as an inter-governmental organization associated with the CG system. In its research in relation to rice production and development in West Africa, WARDA was establishing links with both IITA and IRRI. TAC welcomed the progress being made and expressed the hope that agreements would soon be finalized and implemented.

78. The main point for comment in the WARDA Programme and Budget was the estimated expenditure of \$240,000 for the decentralization of the research and development activities,

a decision taken by the Board of WARDA based on the recommendations of Dr. Chandler, consultant to WARDA. This would lead to four sub-regions with capital provision to strengthen and improve the facilities, including housing and laboratories at some cooperating national stations.

79. Although TAC members were in agreement with this new approach by WARDA, concern was again expressed about the continuing need for adequate technical supervision of the rice trials. It was pointed out, however, that Dr. Chandler had recorded in his report reasonable satisfaction with the improved standard of this work. In this connection TAC expressed its satisfaction with progress made in the training programme of WARDA particularly in relation to the needs for good supervisory staff. It felt some further concern, however, that the decentralization process might not necessarily lead to the lightening of the administrative superstructure which it had so long recommended. It noted, however, that the Advisory Committee had been abolished.

80. TAC agreed in principle to these developments although it felt handicapped by not having the benefit of the Chandler Report to give an in-depth appraisal. It was requested that this be made available for further discussion at the October meeting.

81. With the above comments TAC endorsed the request of WARDA for \$1.5 million for 1977, noting that the provision for germplasm storage related only to breeders' working collections of rice germplasm.

vi. International Livestock Centre for Africa (ILCA)

82. Whilst commending the Director for the very rapid progress made in the establishment of ILCA's documentation programme and the cooperative programme in Mali, the Committee expressed considerable concern over the apparent escalation of the total budget in 1977 to \$26 million, well beyond the \$11 million foreseen in the foundation document. The headquarters operations had expanded to a cost of some \$7 million and capital costs were already approaching the foreseen limit. Part of this high cost could no doubt be ascribed to an acknowledged need to employ expatriate support staff at international levels of salary. The Committee felt, however, that other costs, both for capital and recurrent expenditures should be re-examined.

83. The documentation programme, with its facility for production of micro-fiches had been a recognized first priority which had been ably tackled. Reference was made to the possible utilization in due course of some of the programmes' material on an information exchange basis with the proposed Buffalo Research Programme's documentation centre at SEARCA.

84. Whilst recognizing that the cooperative programmes formed part of the core activities of ILCA, members questioned the expansion of this programme from \$0.2 million to



\$1.7 million, and the need to virtually establish a rather substantial sub-station in Mali with laboratory and housing facilities.

85. The Committee felt that the attention of the ILCA Board and the CGIAR Secretariat should be called to its reservations about the budget, especially the costings which it found confusing. The Board should be requested to scrutinize the budget more carefully, with a view to its re-presentation.

86. Whilst the programme, as distinct from the budget was found generally acceptable, the members were not satisfied with the progress made towards the build-up of inter-disciplinary teams, finding a top heavy emphasis being given to breeding work, and insufficient to animal health. In the latter context the importance of attention to wild animals was stressed.

87. The Committee recognized that the CGIAR Secretariat was appraised of the need to seek means of paring the ILCA budget and anticipated that this would be properly effected.

vii. International Laboratory for Research on Animal Diseases (ILRAD)

88. TAC was satisfied with the progress achieved by ILRAD since its establishment. It noted that the work on the diseases Trypanosomiasis and Theileriosis, involving the use of vectors (tsetse fly and ticks) had started, and that cooperative research programmes had been established with the East African Veterinary Research Organization, the Washington State University, and the University of Glasgow, and were being developed with a number of other institutions and organizations including ILCA and ICIPE.

89. Following discussions with the Director, Dr. Henson, TAC was satisfied that a supply of tsetse flies in sufficient numbers and of the right type and quality which were needed for the research programme, could not be satisfactorially obtained from any other source as and when required. It therefore strongly supported the request for \$214,800 in the Revised 1976 Capital Budget, for the immediate establishment of a tsetse fly vector facility at ILRAD, and the request for \$75,264 for a tick facility, to be used primarily as a tick maintenance and breeding area where cattle could be infected with Theileria.

viii. Centro Internacional de Mejoramiento de Maiz y Trigo (CIMMYT)

90. On the opportunity of the 10th anniversary of CIMMYT, TAC was pleased to learn that CIMMYT-related varieties of wheat were now grown on more than 25 million hectares. This has resulted in an estimated 125 percent increase in yields for those areas. CIMMYT was confident that these trends could be maintained for the five years to come by further advances in the stabilization of yields and local adaptation, along with other necessary improvements in wheat production. TAC had also noted with satisfaction that the maize programme was now expected to have a substantial impact on production similar to that experienced from 1962 in wheat and since 1965 in rice, by the large-scale introduction of high yielding varieties.

91. CIMMYT considered that there was no major new development or change in its programme for 1977 as compared to that of 1976. TAC had therefore concentrated its discussions on some issues which had been raised before by the Committee and, more recently, by the Quinquennial Review Panel, and also commented on the new format which had been adopted by CIMMYT for the presentation of its Programme and Budget.

92. TAC had some difficulty in assessing the present and future size CIMMYT's regional programmes from this new presentation. Some regional activities were financed from special grants while others were incorporated in the core programme and budget. The Committee understood that, since these programmes had just started, it was difficult for CIMMYT to predict their optimum size, although, on average, it was not expected to rise above two persons per region. CIMMYT anticipated, however, from its present experience in East Africa, that some of the regional teams might also require the services of an economist in the future, wherever the size of the programme and its dependence on local socio-economic policies would warrant it. TAC was also informed that CIMMYT's involvement in national programmes was expected to stabilize at its present level. TAC had requested a report on the outreach programmes of CIMMYT as a supplement to the Quinquennial Review for consideration at its October meeting.

93. The Committee had noted with satisfaction that the Quinquennial Review Panel had, by and large, endorsed the other aspects of the programme of CIMMYT. TAC shared the views of CIMMYT that the conclusions and recommendations of the Review Panel did not call for significant monetary changes in the programme and budget of the Centre for 1977, but rather expressed slight differences of approaches or differences of emphasis to be further considered by CIMMYT in the implementation of its future programmes. Among the questions raised were the need to increase trainers' training activities; to maintain existing links with basic research; to further involve CIMMYT's economists in forward planning of the programme; to ascertain future strategies in plant pathology and, for maize, in raising protein content; to further extend the cooperation with IITA beyond existing collaboration in West Africa, and to review the role and place of postdoctorate fellows in the programme.

94. TAC had requested additional information on these issues, as indicated in its discussions of the Quinquennial Review Report, and did not wish to recommend at this stage any change in the proposed programme for 1977, noting that the Report of the Quinquennial Review would be completed for formal presentation and final discussion of its conclusions at its next session in October.

ix. Centro Internacional de Agricultura Tropical (CIAT)

95. No major changes or new developments were anticipated for 1977 in the ongoing programmes of CIAT in cassava, beans, swine, or rice in cooperation with IRRI, and maize in

cooperation with CIMMYT. TAC was pleased to note the significant progress made in 1976 and gave its general support to these programmes as proposed by CIAT for 1977.

96. The Committee also commended the efforts made by CIAT for a concentration and streamlining of its beef programme. TAC gave its full support to the priority given by CIAT to the areas of the Llanos Orientales and similar acid savannah lands in Latin America and, within these areas, to the problems of animal nutrition as the main limiting factor to raising animal production. It noted with approval that the proposed programme for improvement of forage plants would follow a similar pattern to that already well established by CIAT for other crops, and should bring further advances in the utilization not only of Stylosanthes germplasm but also of other fodder plants. TAC was assured that the beef programme would continue to maintain a sufficient level of expertise in the other disciplines of animal nutrition, herd management, health control and economics in order not to lose sight of the other interrelated problems of production while concentrating on pasture improvement. TAC was informed that, due to the difficulty of communication between its Palmira headquarters and the areas concerned in the beef programme (e.g. Carimagua), CIAT would utilize, on an experimental basis, a new site near Palmira as a relay station where acid soil conditions would permit preliminary screening and testing of forage plants. TAC agreed that CIAT should report in 1977 on the adequacy of this arrangement in the context of other possibly more costly alternatives to establish better linkages with the Llanos and also with other areas of South America concerned in the programme.

97. TAC approved the proposed establishment of a germplasm unit in CIAT which would service the several crop programmes of the Centre, and the modification of the meat laboratory into a germplasm storage facility. While recognizing that the meat laboratory at Palmira was of limited use to the beef programme, TAC stressed the need for CIAT to secure other arrangements for assessing meat quality in the context of its beef programme. As to the phytosanitary problems involved in germplasm distribution, TAC was assured by CIAT that all possible measures would continue to be taken to avoid spreading diseases. In this context CIAT was also considering the possibilities offered by tissue culture techniques and TAC supported this approach which had already proved feasible in other areas.

98. TAC was informed that the economists of CIAT would now each work as an integral part of the multidisciplinary teams established for each commodity programme. In discussing the comparative advantages of this arrangement versus that of a pool of economists, TAC was assured that cooperation would be maintained among economists assigned to the commodity programmes, in particular with respect to the development of a common data base and methodology. Other general economic studies would be carried out through a special project under the Assistant Director. Confirmation was also given to TAC that such special projects would be established on an ad hoc basis with a limited scope and duration and not as a replacement for the small farming systems programme which had been discontinued.

99. Taking into account the above considerations, TAC approved the proposed programme of CIAT, noting that CIAT would have to make a special effort in filling existing and future vacancies in time for the full implementation of the proposed activities.

x. International Centre for Agricultural Research in the Dry Areas (ICARDA)

100. TAC was pleased to learn that in the last few months significant progress had been made towards the establishment of the new Centre of the CGIAR system. Sites for the Centre in Iran, Syria and Lebanon had been selected and as soon as the memoranda of understanding had been signed steps would be taken for the acquisition and preparation of the land by the respective governments. TAC had been informed that the Executing Agency (IDRC) was rather optimistic that they would be able to sign agreements with at least Iran and Syria before Centres' Week. It was considered that donors would agree that, in view of the present circumstances in Lebanon, the signatures of two of the three host countries would be adequate in order to proceed with the actual creation of the Centre.

101. TAC was informed that the Charter of ICARDA had been signed by the three co-sponsoring agencies of the CGIAR and that the inaugural Board of Trustees had met formally for the first time in January of this year. Dr. Obaid, Deputy Minister of Agriculture, Saudi Arabia, had been elected as its Chairman. The Board had established a Search Committee responsible for selecting the first Director-General for ICARDA. Meanwhile, an Acting Director-General (Project Development Officer) had been chosen and he would assume responsibilities in August for one year for the planning and development of the ICARDA sites and other essential facilities, pending the appointment of another person as Director-General.

102. TAC approved the programme and budget of ICARDA for 1977, noting that the major portion of the Arid Lands Agricultural Development (ALAD) Regional Network Programme is now being funded under the ICARDA mechanism to maintain on-going research until the Centre is operational.

xi. International Board for Plant Genetic Resources (IBPGR)

103. In the absence of a representative of IBPGR to provide details not given in the Summary of the Draft Programme and Budget proposals for 1977 tabled at the meeting, TAC felt it had not sufficient information to allow adequate discussion on which to form conclusions and recommendations. It therefore requested that the Priority Statement and other relevant documentation, as well as reports of the Crop Advisory Committees of the IBPGR be made available for its October meeting. TAC had been instrumental in the creation of the IBPGR and was naturally anxious to follow its progress.

104. With regard to the important TAXIR (GR/CIDS) Programme, the progress of which was commended, it was felt that the international centres involved should not be charged any of the costs in view of their considerable inputs to the work of the Programme.

105. Mention was made of the large provision for meetings in the budget, occasioned by the formation of the Crop Advisory Committee. It was pointed out, however, that these were expected to meet only on an ad hoc basis, rather than regularly and that the costs should not necessarily be regarded as a recurring item.

106. The Committee noted that the IBPGR had recently discussed forest genetic resources and had approved in principle support for a restricted operation, subject to the CGIAR's reaching some definite decision regarding financial support for forestry. In this context the Committee was reminded that the Board was also expected to coordinate activities funded from other sources than its own budget.

107. Remarking that the IBPGR was a new body, still in a formative stage, the Chairman drew the attention of the Committee to the fact that the 1977 budget, as far as could be seen, allowed for the continuation of activities already planned or started and that the total requested was only little higher than the previous year. It was concluded that rather than attempt to pass ill-informed views the Committee would reach a decision following a review of full documentation at its October meeting.

A TAC PROPOSAL FOR  
AN INTERNATIONAL COOPERATIVE BUFFALO RESEARCH PROJECT

The domestic water buffalo population of the world, which numbers about 150 million, constitutes a major source of farm power, milk and meat; that in spite of its great importance to the overall economy of many Asian, Far East and Near East countries, no major effort has been made to increase farm level output from the buffalo through programmes of improved feeding, management and the conservation and use of selected superior germplasm. It is considered that many of the biological and socio-economic problems limiting the efficiency of production and utilization of the buffalo require careful and intensive research.

This project proposal is presented as an alternative to the original proposals for establishing an international buffalo research and training centre to achieve the same purpose. As such, although the magnitude of the investment requirements may be about the same, this proposal would have the advantage of moving the programme at a faster rate and at the same time build the necessary infrastructure for institutionalizing buffalo development schemes by strengthening basic national buffalo research capabilities and maximizing advances in the use of the technology that may be developed.

Objectives of the Project

Long-term objectives

The long-term objectives of the project are to assist the governments of the developing countries in which buffaloes have a potentially important role in agriculture, to strengthen their national buffalo research and development programmes and to establish cooperative arrangements between research institutions and organizations in the different countries, so as to improve their efficiency in the utilization of scarce research resources and in the implementation of research results.

In particular, the project will:

- 1) Build the necessary infrastructure for an international buffalo research and development programme by strengthening the basic national research capabilities and maximizing advances in technology developed on an international level.
- 2) Establish a linkage mechanism that would meaningfully weld the national research programmes together in an international network for buffalo development; and thereby
- 3) Improve buffalo production and utilization so that large numbers of the farming population of the developing countries in Asia and the Near East could benefit through improvement of agro-livestock production, increased income and better nutrition.

Immediate objectives

- 1) To catalyze effectively the establishment and strengthening of national buffalo research and development programmes.
- 2) To stimulate new/continuing in-depth assessment of the national buffalo development programmes in the countries concerned, including the identification of benchmark information, developmental constraints, and evolving/updating relevant strategies for national buffalo research and development.
- 3) To utilize the existing resources and capabilities in some of the countries involved and utilize them for research and research training activities which would have implications in several of the countries included in the project, for example, along the following lines:

Egypt	-	nutrition studies (meat type)
India	-	dairy production
	-	germplasm conservation and resource development
	-	reproductive physiology and artificial insemination (dairy)
Pakistan	-	nutrition (dairy)
Philippines	-	meat production technology
Thailand	-	reproductive physiology and artificial insemination (meat-type)
	-	germplasm resource conservation and development (meat-type)
Sri Lanka	-	buffalo diseases, including reproductive diseases.
- 4) To establish a sustained national documentation programme on the buffalo in each of the countries involved and feed the information into an international buffalo documentation centre which will be established as a repository of information on the buffalo and which would be responsible for dissemination of such information to all interested countries.
- 5) To develop an effective mechanism for interaction between research institutions at the country and international levels; this would involve inter alia the establishment of research cooperation between institutions active in research on specific subjects with a view to tackling related problems in a concerted manner, by organizing the exchange of information on recent research findings, exchanging staff and consultants, and organizing workshops and seminars on topics of common interest to participating institutions.
- 6) To establish an international coordinating unit for the project which would develop and implement an effective mechanism for coordinating an international buffalo research development programme.

### Institutional Framework

The project shall operate under the basic concept of injecting self-reliance in the various country development schemes. Thus, the project shall operate through the appropriate ministry of the countries concerned. In so doing, the government of each participating country shall establish a national buffalo research and development centre, or simply identify an existing institution to serve as such and designate a national research coordinator as liaison officer for the project.

Buffalo research capabilities are not equally developed in all countries. A few countries, such as Egypt, India, Philippines, Pakistan, Thailand and Sri Lanka, which have developed some relatively advanced capabilities in certain key areas of buffalo production, will be asked to take on added responsibility in the initial stages, for inter-country cooperation in research and research training.

The project shall be organized through a flexible framework of cooperating national institutions and with a small coordinating unit.

There would be a national buffalo research coordinator in each cooperating country, who would be the national focal point for international cooperation. The project would be headed by a small international coordinating unit assisted by a Project Programme Committee consisting of four members to be nominated by the Chairman of TAC and by FAO.

It was considered that the proposed machinery would permit of a high degree of autonomy in the research organization without alienating it from development, and bearing in mind that national research programmes should serve national development. It was agreed that activities and funding should be in accordance with capabilities and all activities should be thoroughly reviewed annually.

Considering that the project would involve the channeling of funds to research programmes in a number of different countries, the arranging of workshops and seminars with participants from several national institutes, the use of consultants, and the services of a project director to guide the effective utilization of international inputs into the national buffalo research programmes, and recognizing that the necessary agreements already existed between FAO and the governments concerned for executing projects of this nature, it is recommended that the project should be executed through FAO. It is further suggested that FAO consider making full use of the mechanism provided by its Regional Animal Production and Health Commission for Asia, the Far East and the Southwest Pacific (RAPHCAP) in the implementation of the Project. It was felt that through this mechanism the participating national institutions could ensure that the project would respond to their needs for buffalo research and development.



The international cooperative buffalo research project proposed here could initially involve seven countries (Egypt, India, Indonesia, Pakistan, Philippines, Sri Lanka and Thailand) which collectively have some 70 percent of the world's buffalo population. However, as the project develops, additional countries may be brought into the programme of cooperation. For research training the project would also be open from the beginning to selected participants from other countries with sizeable buffalo populations.

It is proposed that the support to the International Cooperative Buffalo Research Project (ICBRP) be phased as follows: a preparatory phase in year 1, and an establishment phase in years 2 and 3. It should be stressed that the proposed budget for the establishment phase is purely indicative and would be refined during the preparatory phase. In year 3, a review mission should be mounted to take stock of the progress made and to develop concrete plans of action on a longer term basis.

International Cooperative Buffalo Research Project

Proposed Budget for Preparatory Phase (Year 1)

	<u>Total US\$</u>
1. Coordinating Unit	
a) <u>Personal</u>	
Project Director (12 mm)	55,200
Production Planning Specialist (6 mm)	25,200
1 Secretary (12 mm)	<u>15,000</u>
	95,400
b) Operating costs	40,000
c) Travel expenses	<u>30,000</u>
	Subtotal 165,400
2. Programme Planning Meetings	30,000
3. International Buffalo Documentation Centre	25,000
4. Consultancies (3 mm)	<u>12,000</u>
	TOTAL \$232,400
	=====

International Cooperative Buffalo Research Project

(Proposed Budget in U.S. Dollars)

	1977 <u>Year</u>	1978* <u>Year 2</u>	1979* <u>Year 3</u>	1980* <u>Year 4</u>	Year N
	Preparatory phase	(Establishment phase)		(Implementation phase)	
<u>Centrally organized</u>					
1) Coordinating Unit	(165,400)				
2) Programme planning	( 30,000)				
3) International workshops	-				
4) International Buffalo Documentation Centre	( 25,000)				
5) Fellowships					
6) Review Mission					
<u>Subtotal</u>	<u>(220,400)</u>				
<u>Support of national activities</u>					
1) Consultants	( 12,000)				
2) Research programme contracts	-				
3) Support to national buffalo documentation programme	-				
<u>Subtotal</u>	<u>( 12,000)</u>				
TOTAL	(232,400)	1,500,000	1,800,000	2,200,000	

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\* Tentative calculations

ANNEX II

PROPOSED INTERNATIONAL VEGETABLE RESEARCH PROJECT

The Technical Advisory Committee to the Consultative Group on International Agricultural Research at its 13th meeting at Los Baños, Philippines, in May 1976 resolved to have a special mission of one or two consultants to formulate an internationally-based short-term pilot research project on vegetables. The total time involved in this mission is not to exceed 4 man-months.

Terms of Reference for the work of the International Vegetable Research Project Formulation Mission.

"The mission shall visit areas where a two-location pilot project might be established in South/S.E. Asia and Africa, and collect information that will permit a concrete recommendation and justification to TAC on:

- a) locations in both South/Southeast Asia and Africa where an internationally-based pilot research project can be established;
- b) institutions that might be considered as suitable for hosting the project in each region. Both existing national and international research institutions to be considered without making any commitments;
- c) the main geographical areas of action and the main species of vegetable crops where research should be concentrated taking into account the recommendations of the TAC Vegetable Research Appraisal Mission, 1975;
- d) a broad outline of the work for the duration of the project (3-5 years) with more explicit details of the first year's activities including the experimental work to be initiated, the surveys and analytical work to be conducted, and inauguration of research training for the project. Although the basic objective will be to collect information that will later permit decisions for longer-term actions, it is expected that the information and genetic material collected will enable the project to actually contribute to the improvement of the selected crops through the distribution of valuable germplasm, training and application of results of the research activities.

The draft report of the Mission's findings, conclusions and recommendations should be submitted to the TAC Secretariat by 15 March 1977, in time for consideration at the 15th meeting of TAC, May/June, 1977."

The tentative time schedule for the mission is as follows:

Briefing - FAO, Rome by TAC Secretariat and appropriate Technical Divisions --  
1 week.

Field Work - Visits to research institutions, etc., in selected countries of  
S. /S.E. Asia and Africa -- 4 weeks (each region).

De-briefing/Reporting - FAO, Rome -- 2 weeks.

TAC *M. Swaminathan*

*File F-2*

**CONSULTATIVE GROUP ON INTERNATIONAL  
AGRICULTURAL RESEARCH**

**Thirteenth Meeting of the  
TECHNICAL ADVISORY COMMITTEE**

**8 - 13 MAY 1976**

**Summary of Recommendations**

by

**Dr. M. S. Swaminathan  
Vice-Chairman, TAC**

**The International Rice Research Institute  
Los Baños, Laguna, Philippines**

In the absence of Sir John Crawford, the responsibility for summing up the recommendations of the 13th meeting of TAC has fallen upon me. I would like to emphasize that these recommendations should be considered tentative. I am planning to discuss them with Sir John later this week at Canberra and the final recommendations would have the benefit of his advice. As decided at our opening meeting, a cable has been sent to Sir John wishing him speedy recovery. It is unfortunate that we could not have his wise counsel at this meeting. I have also sent to Mr. Peter Oram our warm regards and sincere gratitude for all that he had done for TAC from 1971 to 1976.

I shall take up the major conclusions of TAC at this meeting in the order listed on the agenda.

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## 13th TAC MEETING

### CHAIRMANS' SUMMING-UP OF CONCLUSIONS AND RECOMMENDATIONS

#### Agenda Item 3. CIMMYT Quinquennial Review

The preliminary draft report of the Quinquennial Review of CIMMYT indicates that the Review Panel has by and large extended support to the basic research strategies and approach of CIMMYT. The accomplishments of CIMMYT in the improvement of bread wheat, durum wheat, Triticale, maize and barley are indeed impressive. The programs are dynamic and production-oriented. CIMMYT has devoted its attention with single-minded devotion to the improvement of the production of wheat and maize. It has developed the world's largest program in Triticale and the panel has recommended that the Triticale program should become a part of the core activity of CIMMYT. Also, the IBPGR should recognize CIMMYT as the repository of germ plasm of Triticale. TAC supports these suggestions.

The panel has recommended that the barley work of CIMMYT should continue and that close linkage should be established with ICARDA after the new institute becomes operational. CIMMYT, however, is not in agreement with the view of the panel that it should restrict its responsibility as regards barley mainly for the highlands of Latin America, once ICARDA is established. The panel did not entirely agree with the major stress laid on breeding varieties for general adaptation in contrast to adaptation to specific agro-ecological conditions. TAC feels, however, that CIMMYT's operational procedures permit national programs to breed varieties for specific as well as general adaptation. Hence, the differences in viewpoint seem to be more apparent than real. TAC felt that practical ad hoc cooperative arrangements should be negotiated in due course between CIMMYT



and ICARDA similar to those already established by CIMMYT with other centers. The panel also considers it desirable that CIMMYT may further intensify research on breeding times of durum wheat, barley and maize for cultivation under marginal conditions of management. The panel has suggested the more intense use of trainer's training programs and the use of post-doctoral fellowships for training research leaders from cooperating countries. TAC is in agreement with these suggestions.

Members of TAC desired that the panel in its final report may give more information on the following aspects:

- a) the recent research contributions and overall policy of CIMMYT, and in addition, the findings of past review missions;
- b) the nature of constraints, if any;
- c) quarantine arrangements made to ensure that the extensive seed exchange undertaken by CIMMYT does not lead to the unconscious dispersal of seed-borne pathogens;
- d) its judgement on the adequacy of physiological and socio-economic research;
- e) the relations among international centers such as those between CIMMYT and IITA, CIAT, as well as with national research centers should be spelt out in more detail. CIMMYT and IRRI could develop collaborative arrangements on breeding suitable lines for the rice-wheat rotation which is becoming important in South Asia. The extension tasks of CIMMYT should be described and the degree to which CIMMYT is involved in developmental projects should be indicated.

- f) The conclusions of the report should include the specific recommendations made in the main body of the report in order to leave no ambiguities in the views of the Panel.

TAC viewed with concern the hardship caused to CIMMYT due to inadequate cash flow. It will again stress upon CGIAR the necessity for ensuring orderly cash flow according to approved budgets so that the Director-General and senior staff of the institute could concentrate on implementing the research and training programs of the institute effectively.

The Panel also supports the principle of CIMMYT's regional services programme. There has, in the past, been some misunderstanding on the purposes and extent of this programme which has, as its principal thrust, the strengthening of CIMMYT's own research and as an important by-product building up national research capacities in collaborating countries. If possible, the TAC would like the Chairman and one or two members of the Review Panel, including the Secretary, to visit one of these programmes in North Africa or in the Middle East to gain firsthand knowledge and to report more fully to the Committee on how these regional services are being planned and implemented.

TAC members were invited to send to the TAC Secretariat written comments on the preliminary draft before 30th May.

#### Agenda Item IV

##### Water Buffalo Research

It was recalled that two countries of Asia initially proposed to host an international center for water buffalo research. A UNDP/FAO Asian Regional Survey had confirmed the needs and interests of the countries of the region in this field and proposed an international cooperative buffalo research programme. TAC then called an expert consultation on the subject.

The report of the consultation recommended that an international effort be made to strengthen water buffalo research through the establishment of a cooperative network of national programmes. Within this network, some participating national institutions with relatively advanced expertise would be assigned regional responsibilities for leading the common research effort in specific programme areas. The network would be guided by an international board or steering committee including representatives of the national and international institutions involved. A coordinating unit and a documentation center would service the network. Their proposed location had been agreed upon by the network, e.g. the coordinating unit in Bangkok, Thailand and the documentation center in SEARCA.

The consultation recommended that the project be executed through FAO. The consultation further suggested that FAO consider making full use of the mechanisms provided under its Regional Animal Production & Health Commission of Asia, Far East and South West Pacific in the implementation of the project. It was felt that

through this mechanism and that of the international board of the network, the participating national institutions could ensure that the international network programme would respond to their needs for buffalo research and development.

While confirming the need for an international effort for water buffalo research, TAC made a number of comments on the proposal:

(1) Concern was expressed about the possible risk of dispersion of activities in a cooperative network involving several national institutions. The proposed scheme would, however, have the advantage of maintaining close links between research and national development programmes, providing that development plans of the countries concerned, especially their objectives, were further examined during the elaboration of the cooperative programme.

(2) A close coordination should be ensured both within the network and outside, in particular with several international centers particularly ILCA and programmes such as the Agricultural Information Bank of Asia operated by SEARCA in liaison with the AGRIS Programme of FAO.

(3) The type of research carried out through the network should be production-oriented and take due account of the actual capabilities and development needs of the national institutions involved.

(4) The scope of the international effort could be viewed either as that of an international coordinating unit servicing the research network of national programs. For the time being, TAC recommended a step-by-step approach starting with a preparatory phase while donors

may, in a second phase, provide directly to the national programmes part of the larger support needed.

TAC recommends to the CGIAR that an International Cooperative Buffalo Research Project (ICBRP) be established as follows:

(1) The proposed ICWBRP would be as described in Appendix A.

(2) The Project would initially involve seven countries (Egypt, India, Indonesia, Pakistan, Philippines, Sri Lanka, and Thailand) which collectively have some 70 percent of the world's buffalo population. However, as the Project develops, additional countries may be brought into the programme of cooperation.

(3) The International Coordinating Unit would be located in Bangkok, Thailand.

(4) In preparing the Plan of Operations of the Project, the International Coordinating Unit shall be assisted by a Programme Committee consisting of 4 members to be nominated by the Chairman of TAC and by FAO.

(5) The International Buffalo Documentation Center would be integrated with the Agricultural Information Bank of Asia (AIBA) which is operated by SEARCA and which is currently linked up with the AGRIS network of FAO.

(6) FAO should be approached regarding its willingness to act as Executing Agency in respect of the Project. It is further suggested that FAO be asked to consider making full use of the mechanism provided by its Regional Animal Production and Health Commission for Asia, the Far East, and the Southwest Pacific (RAPHCAP) in the implementation of the Project.

(7) It is proposed that the support to the ICBRP be phased as follows: a preparatory phase in year 1, and an establishment phase in years 2 and 3. It should be stressed that the proposed budget for the establishment phase is purely indicative and would be fleshed out during the preparatory phase. In year 3, a review mission will be mounted to take stock of the progress made and to develop concrete plans of action on a longer-term basis.

(8) The proposed budget for year 1 will amount to \$232,400 and its breakdown is shown in Appendix B-1. The indicative budget for years 2 and 3 is shown in Appendix B-2.

## INTERNATIONAL COOPERATIVE BUFFALO RESEARCH PROJECT

The domestic water buffalo population of the world, which numbers about 150 million, constitutes a major source of farm power, milk and meat; that in spite of its great importance to the overall economy of many Asian, Far East and Near East countries, no major effort has been made to increase farm level output from the buffalo through programmes of improved feeding, management and the conservation and use of selected superior germ plasm. It is considered that many of the biological and socio-economic problems limiting the efficiency of production and utilization of the buffalo require careful and intensive research.

This project proposal is presented as a possible alternative to the original proposal for establishing an international buffalo research and training centre to achieve the same purpose. As such, although the magnitude of the investment requirements may be about the same, this proposal would have the advantage of moving the programme at a faster rate and at the same time build the necessary infrastructure for institutionalizing buffalo development schemes by strengthening basic national buffalo research capabilities and maximizing advances in the use of the technology that may be developed.

Objectives of the ProjectLong-term objectives

The long-term objectives of the project are to assist the governments of the developing countries in which buffaloes have a potentially important role in agriculture, to strengthen their national buffalo research and development programmes and to establish cooperative arrangements between research institutions and organizations in the different countries, so as to improve their efficiency in the utilization of scarce research resources and in the implementation of research results.

In particular, the project will:

1. Build the necessary infrastructure for an international buffalo research and development programme by strengthening the basic national capabilities and maximizing advances in technology developed on an international level.
2. Establish a linkage mechanism that would meaningfully weld the national research programmes together in an international network for buffalo development; and thereby
3. Improve buffalo production and utilization so that large numbers of the farming population of the developing countries in Asia and the Near East could benefit through improvement of agro-livestock production, increased income and better nutrition.

Immediate objectives

1. To catalyze effectively the establishment and strengthening of national buffalo research and development programmes.
2. To stimulate new/continuing in-depth assessment of the national buffalo development programmes in the countries concerned, including the identification of benchmark information, developmental constraints, and evolving/updating relevant strategies for national buffalo research and development.
3. To utilize the existing resources and capabilities in some of the countries involved and utilize them for research and research training activities which would have implications in several of the countries included in the project, for example, along the following lines:
  - Egypt - nutrition studies (meat type)
  - India - dairy production
    - germ plasm conservation and resource development (dairy)
    - reproductive physiology and artificial insemination (dairy)
  - Pakistan - nutrition (dairy)
  - Philippines - meat production technology
  - Thailand - reproductive physiology and artificial insemination (meat-type)
    - germ plasm resource conservation and development (meat-type)
  - Sri Lanka - buffalo diseases, including reproductive diseases.
4. To establish a sustained national documentation programme on the buffalo in each of the countries involved and feed the information into an international buffalo documentation centre which will be established as a repository of information on the buffalo and which would be responsible for dissemination of such information to all interested countries.
5. To develop an effective mechanism for interaction between research institutions at the country and international levels; this would



involve inter alia the establishment of research cooperation between institutions active in research on specific subjects with a view to tackling related problems in a concerted manner, by organizing the exchange of information on recent research findings, exchanging staff and consultants, and organizing workshops and seminars on topics of common interest to participating institutions.

6. To establish an international coordinating unit for the project which would develop and implement an effective mechanism for coordinating an international buffalo research development programme.

#### Institutional Framework

The project shall operate under the basic concept of injecting self-reliance in the various country development schemes. Thus, the project shall operate through the appropriate Ministry of the countries concerned. In so doing, the Government of each participating country shall establish a national buffalo research and development centre, or simply identify an existing institution to serve as such and designate a national research coordinator to liaise with the project.

Buffalo research capabilities are not equally developed in all countries. A few countries, such as Egypt, India, Philippines, Pakistan, Thailand and Sri-Lanka, which have developed some relatively advanced capabilities in certain key areas of buffalo production, will be asked to take on added responsibility in the initial stages, for intercountry cooperation in research and research training.

The project shall be organized through a flexible framework of cooperating national institutions and with a small coordinating unit.

There would be a national buffalo research coordinator in each cooperating country, who would be the national focal point for international cooperation. The project would be headed by a small international coordinating unit assisted by a Project Programme Committee consisting of four members to be nominated by the Chairman of TAC and by FAO.

It was considered that the proposed machinery would permit of a high degree of autonomy in the research organization without alienating it from development, and bearing in mind that national research

programmes should serve national development. It was agreed that activities and funding should be in accordance with capabilities, and all activities should be thoroughly reviewed by an international board each year.

Considering that the project would involve the channeling of funds to research programmes in a number of different countries, the arranging of workshops and seminars with participants from several national institutes, the use of consultants, and the services of a project director to guide the effective utilization of international inputs in the national buffalo research programmes, and being aware of the fact that the necessary agreements already exist between FAO and the governments concerned for executing projects of this nature, it is recommended that the project should be executed through FAO. It is further suggested that FAO consider making full use of the mechanism provided by its Regional Animal Production and Health Commission for Asia, the Far East and the Southwest Pacific (RAPHCAP) in the implementation of the Project. It was felt that through this mechanism the participating national institutions could insure that the project will respond to their needs for buffalo research and development.

The international cooperative buffalo research project proposed here could initially involve seven countries (Egypt, India, Indonesia, Pakistan, Philippines, Sri Lanka and Thailand) which collectively have some 70 percent of the world's buffalo population. However, as the project develops, additional countries may be brought into the programme of cooperation. For research training the project would be open from the beginning to selected participants also from other countries with sizeable buffalo population.

It is proposed that the support to the International Cooperative Buffalo Research Project (ICBRP) be phased as follows: a preparatory phase in year 1, and an establishment phase in years 2 and 3. It should be stressed that the proposed budget for the establishment phase are purely indicative and would be fleshed out during the preparatory phase. In year 3, a review mission will be mounted to take stock of the progress made and to develop concrete plans of action on a longer term basis.

###

International Cooperative Buffalo Research Project  
 PROPOSED BUDGET FOR PREPARATORY PHASE (Year 1)

	<u>Total US\$</u>
1. Coordinating Unit	
a) <u>Personal</u>	
Project Director (12 mm)	55,200
Production Planning Specialist (6 mm)	25,200
1 secretary (12 mm)	<u>15,000</u>
	95,400
b) Operating costs	40,000
c) Travel expenses	<u>30,000</u>
Sub-total	165,400
2. Program Planning	
Meetings	30,000
3. International Buffalo Documentation Center	25,000
4. Consultancies ( 3 mm)	<u>12,000</u>
TOTAL .....	<u>\$232,400</u>

International Cooperative Buffalo Research Project

(Proposed Budget in U.S. Dollars)

	1977	1978*	1979*	1980
	<u>Year</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4 - Year N</u>
	Preparatory phase	(Establishment phase)		(Implementation phase)
<b>I. Centrally organized</b>				
1. Coordinating unit	(165,400)	233,600	25,000	262,000
2. Program planning	( 30,000)	20,000	20,000	20,000
3. International workshops	-	60,000	60,000	60,000
4. International Buffalo Documentation Center	( 25,000)	50,000	50,000	100,000
5. Fellowships	-	90,000	120,000	120,000
6. Review Mission	-	-	30,000	-
Sub-total	(220,400)	453,600	540,000	547,000
<b>II. Support of national activities</b>				
1. Consultants	( 12,000)	60,000	60,000	60,000
2. Research program contracts	-	1,000,000	1,200,000	1,500,000
3. Support to national buffalo documentation programs	-	10,000	20,000	20,000
Sub-total	( 12,000)	1,070,000	1,280,000	1,580,000
GRAND TOTAL	(232,400)	1,523,600	1,820,000	2,127,000

\*Tentative calculations.

## Agenda Item V. Priorities for Research

The revised Priorities paper was generally endorsed by TAC members and was commended for clearly enunciating the priorities developed at previous TAC meetings. In developing its statement on priorities, TAC has kept the following basic considerations in view:

1) The highest priority should be accorded to the improvement of food production and availability in the developing countries;

2) Priority should be given to research which can increase the purchasing power of landless peasants and marginal and small farmers so that they will be in a position to buy the needed quantities of food;

3) Since the funds available for supporting international agricultural research will not be unlimited, TAC's exercise in developing priorities cannot just be a compilation of major research gaps but should be one which is capable of contributing most towards achieving the two objectives listed above within the funds available.

Seen in the above context, TAC reiterates that its first priority will go to the improvement of crops and animals which provide most of the calories and proteins in developing countries. For this purpose, cereals, food legumes, and crops giving starchy products like potatoes, cassava, and other tubers should continue to receive priority attention. TAC notes that among legumes, satisfactory arrangements for organizing international agricultural research have been made for all crops except soybean. Similarly, in major starchy products, a crop which may deserve international attention is plantain (banana).

Among farm animals, ruminant livestock have received specific attention from TAC, leading to the establishment of ILCA and ILRAD in Africa. TAC has been interested in stimulating research on water

buffalo and is now ready to make a specific recommendation to CGIAR. One other farm animal which may deserve closer examination is the goat. Goat is used extensively by poorer people in many developing countries as a source of milk, meat, and fur.

Aquaculture technology leading to increased production of fishes has also been considered by TAC as a priority area of research. A TAC-sponsored Working Group had given useful recommendations resulting in support being extended to a few projects by some bilateral donors like IDRC.

TAC hopes to make further concrete recommendations to CG at its next meeting.

Among future priorities, TAC considers that research on climate-soil-water-plant relationships is important since such research would be essential for promoting the scientific intensification of farming. Another area which will need increasing attention is post-harvest technology, particularly aspects such as drying, storage, and marketing of farm produce by small farmers. Rodent control and other allied aspects of safe storage of grains in rural homes will also have to receive increasing attention, since a match between production and post-harvest technologies is essential for farmers to derive full benefit from increased production.

Among second order priorities, vegetables, tropical fruits, oil seeds, and cotton deserve consideration. Among oil seeds, coconut in particular deserves attention since it is a very important crop both from the food and income points of view in several countries and is at present suffering from some serious disease problems. Farm forestry is also an important area but has not been assigned by TAC a high priority for international research since the success of this project will depend

to a great extent on public policies by national governments and the amount of community effort generated for the planting and saving of trees. TAC, however, considers that the collection and conservation of germ plasm of tropical forest tree species is an urgent task and should receive attention.

TAC considers the socio-economic research, in particular the analysis of constraints and consequences relating to new technology is an exceedingly important adjunct of biological and technological research. Similarly, research on applied nutrition, micro-analysis of agro-ecological problems, and a study of individual factors of production will be important. This is why TAC has supported the establishment of the International Fertilizer Development Center and the International Food Policy Research Institute and has been urging the optimum use of the expertise developed at the International Center for Insecticide Physiology and Ecology.

Another instance where factor-oriented research may be necessary is the improvement of the efficiency of managing irrigation or rainfall crop water on the farmer's field. Recent studies in soil-plant-water relations suggest that significant water savings in crop production can be made through carefully controlled applications of water to the root zone of the plants. Such findings may have great implications for the future development of a high-productivity agriculture throughout the world. The TAC has given careful attention in the past to the research needs of improved crop water management. The TAC's earlier reviews pointed to large gains in water use efficiency that can be made by appropriate development investments in the improvement of major and minor national irrigation systems, gains that did not require additional research, merely the application of known technologies.

However, the TAC is aware that limitations of crop moisture is often the major factor holding farm yields at low levels. For this reason, the TAC is concerned with worldwide research activities on water as an input to crop production. The Committee pays particular attention to the impact these activities might usefully have for the work of the international centres and the CGIAR. Should the Committee find that new research opens opportunities for further investigations either at existing international centres or through other institutions, it will not hesitate to commend such work to the CGIAR. For the present, the TAC has urged all international centres to accord water management an important place on their research agendas.

One other aspect of factor-oriented research that has received little consideration in the past is the matter of pre-harvest crop losses from large pests such as locust, birds and rodents. The TAC is aware of the magnitude of these losses, but it has not yet given consideration as to how these losses might be reduced as a consequence of appropriate research. For the time being, IARC's are encouraged to investigate protection from the depredations of pests as part of their general work on plant protection. But such work is often inadequate in relation to the magnitude of the problem. The TAC recognizes that more specific research may have to be undertaken at the international centres or through separate arrangements with specialized institutions such as the International Centre for Insect Physiology and Ecology (ICIPE) in Kenya. In the course of its work ahead, the TAC will examine this problem in greater depth.

While international centers may not themselves undertake basic research, it is important that they stimulate basic research relevant to applied field problems. Also, some proportion of research investment



should be devoted to the creation of new technologies for the future. In this respect, research relating to all aspects of production physiology, nitrogen fixation, phosphorus recycling, and non-conventional sources of animal nutrition will have to receive high priority. For this purpose, international centres could stimulate appropriate studies in universities and national research institutions and collaborate with suitable institutions located in both developed and developing countries.

While TAC has been concentrating mainly on areas of research which lend themselves to international effort, it is conscious that in order to derive full benefit from international agricultural research, there has to be strong national R&D programs. TAC hopes that the CGIAR Review Committee would discuss this matter with the CGFPI and develop suitable mechanisms for promoting and supporting national research.

Members of TAC also suggested the following specific amendments to the Priorities paper:

- 1) The budget paper may be left out since these projections tend to get out of date quickly;
- 2) The water management aspect may be expanded in page 23 which deals with factor-oriented research;
- 3) Instead of using the term "lower priorities", "other areas of concern" may be used;
- 4) Cotton is important but should not be given a high priority. The paragraph related to cotton research may be suitably reworded.

Immediate Tasks for TAC Arising from the Priorities Paper

TAC concluded that with the above amendments, the Priorities paper may be sent to CGIAR for distribution at the Centers Week to be held in July. Also arising from TAC's Priorities paper, TAC itself should either form its own budget or with funds from a suitable bilateral donor organize Working Groups in the following areas:

1) Coconut research with particular reference to the current state of knowledge on major diseases such as cadang-cadang and root wilt (advantage could be taken of a meeting being held in India early next year by providing an appropriate TAC input);

2) Research on plantain (banana) -- This may possibly be done in collaboration with the New Guinea Foundation;

3) Goat research for the production of milk, meat and fur;

4) A critical discussion on the role of international centers in farming systems research (at present IITA, IRRI and ICRISAT spend 38, 21, and 18 percent of their respective core budgets on farming systems research).

These Expert Consultations are primarily for the purpose of informing TAC of the current status of research in these areas. They may or may not lead to concrete recommendations by TAC or projects for CG funding.

Agenda Item 6. "IRRI Quinquennial Review"

Turning now to the report of the TAC's Quinquennial Review mission which I had the honour to lead, you will readily understand my gratification that the Committee has unanimously endorsed the final report and has recommended that it be transmitted to the Consultative Group and given as wide circulation as may be deemed appropriate.

At the last meeting of the Committee, when the report was presented in draft, members had the opportunity to discuss freely the findings of the mission and to record their comments. Reminding members that changes in the substance of the report were the prerogative of mission members, the chairman pointed out that nevertheless members comments and requests for clarification of certain points of obscurity and ambiguity could be utilized to advantage in refining the draft. Their comments would be recorded and incorporated in the report of the Committee which would itself of course also be presented to the Consultative Group.

Members had made some constructive suggestions for improvement of the text and these had been reviewed by four members of the mission who were fortunately all present at the last TAC meeting. Agreement had been reached by this group on the changes to be made, most of them relatively minor; one of some substance, was the need to assign a priority rating to the recommendation for staff increases and improved facilities. This had been done.

The revised draft was then submitted to the mission members for approval and further comments, with a deadline date. Comments and corrections had been received from four members and these, together with those of the TAC members and the Chairman, had been incorporated in the final version.

VI-2

The unanimity with which members recommended the adoption of the report, was praised enough in itself. I must though record my thanks as leader of the mission, to the members of the Committee, both for their constructive comments on its redrafting and for their kind remarks on its quality and quality.

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## Agenda Item VII.

### Vegetable Research

At its last meeting, TAC came to the conclusion on the basis of the report of its Appraisal Mission that some form of international research effort is necessary on vegetables used for home consumption by the poor. TAC Secretariat had been asked to prepare a paper giving alternative methods of organizing such research and indicating priorities in the choice of vegetables. After discussions of the paper, TAC felt that vegetable research fits into its priorities for improving human nutrition. Hence, TAC recommends the initiation of an international Vegetable Research Project based on the following principles:

1) Vegetables normally eaten by big masses of people in South East Asia and Africa (tropical lowlands) contribute greatly to their diet and nutrition and there is very little doubt that research and appropriate training can make an important addition to the production and consumption of these vegetables.

2) Taking into consideration the recommendations given by the vegetable Appraisal Mission, TAC has decided to support the general idea to undertake a serious effort but feels that not enough information is on hand that will permit TAC, at this moment, to make a final recommendation as to the organizational form, specific activities, definitive location and other important aspects for a permanent program. TAC is ready to consider its support to an action that in a period of 3 to 5 years will provide the information that is now lacking, and so a short-term or pilot research project will be considered.

3) To be able to prepare the project, it was agreed that this job be given to a special mission which will work for a period of 3 to 4 months and which will be able to report to TAC by early 1977 with a concrete proposal or alternative proposals.

4) The pilot project to be proposed should contain the following elements:

a) Should be a plan for not more than 5 years;

b) The preliminary action should be organized as one coordinated effort although actual work could be conducted in two locations in Asia and in Africa;

c) Should be considered an international project, financed by CG but might be based in one or more existing international institutions, regional or national, which is able to give the project the necessary technical and logistic backstopping.

d) In the period of the pilot project, work will be initiated on the genetic evaluation and utilization of the vegetable crops chosen for priority attention. Also, appropriate training programs will be organized. Another purpose of this research project will be the compilation of all available information on vegetable research.

It is expected that by the end of the project, concrete proposals for long-term action will be available. The proposed International Vegetable Research Project will also help to extend to other countries the results of work of the Asian Vegetable Research Center, Taiwan.

International Vegetable Research Project

Terms of Reference for the Work of the Project Formulation Mission

(Consultant)

- 1) The Mission will consist of one or two consultants.
- 2) The estimated time for the actual field work and report will be a maximum of four months.
- 3) Report should be submitted to TAC on time for consideration on the XV meeting (early 1977).
- 4) The Mission should visit areas where the two pilot projects might be established in Asia and Africa and collect information that will permit a concrete recommendation and justification to TAC on the following:
  - a) Location where the pilot project can be established;
  - b) Institutions that might be considered to host this pilot project (without making any commitments);
  - c) Main geographic areas of action and crops or groups of crops where the work is to be concentrated (along with the recommendations of the vegetable research appraisal mission);
  - d) A broad outline for the three to five years activities with more details for the first year including the experimental work to be initiated, the surveys and analytical work to be conducted, and as many details as seem possible on the activities of this pilot project;

- e) A preliminary budget for the operations\* of the first year with estimates for the following years;
- f) Although the basic objective will be to collect information that will permit later decisions for longer-term actions, it is expected that information and genetic material collected will permit the project to actually contribute to the improvement of the selected crops through the distribution of valuable germplasm, training, and other activities. Hence, these aspects should be considered by the mission and appropriate recommendations made.

Time schedule

Briefing - TAC Secretariat, FAO/Rome and visit to selected

institutions in Europe and/or North America ..... 2 weeks

Field reunion - Visits to institutions in the regions considered

..... 1 month for each region

Briefing and report writing - TAC Secretariat, Rome 2 weeks

Total duration ..... 4 men-months by 1 or 2 consultants.

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\* Since the project is to be hosted in an existing institution, it is possible that only minor capital investments will be required.



Agenda Item VIII. Grain Legumes and Plant Nutrition

In view of the importance attached by TAC to the subject, it had constituted a Subcommittee to review the progress of international research in improving the productivity of grain legumes and in harnessing all forms of plant nutrients. Arising from the recommendations of the Subcommittee, research programs are now in progress in nearly all major grain legumes at international centers. Soybean research alone remains to be organized on international lines under the CG system. The TAC working group which met in New Delhi in October 1974 had given valuable recommendations on the strategies useful for improving the yield potential of grain legumes and for achieving more efficient biological nitrogen fixation in the soil. TAC had also considered from time to time different aspects of fertilizer technology including the proposal for the formation of the International Fertilizer Development Center in the U.S.

Conscious of the need for enriching the organic matter content of tropical soils and for conserving all organic wastes for use as manure, TAC had asked its Subcommittee on Plant Nutrition to meet ahead of the 13th meeting of TAC at Los Baños to discuss and make concrete recommendations on the processing, management, and use of organic wastes. Based on the recommendations of the Subcommittee, TAC suggests the following additional steps:

(a) International agricultural research centers may, where this is not already being done, intensify their research on soil organic matter and introduce organic recycling principles and integrated systems of nutrient supply in improving the fertility status of soils;

(b) FAO, in collaboration with other appropriate international agencies, should consider organizing an information service on the technological and economic aspects of organic recycling which could become a means of collecting and disseminating information on methods of processing and use of organic refuse, including human wastes, from urban and rural areas;

(c) TAC was informed of a program for promoting the use of organic matters as fertilizers prepared by FAO for support from the United Nations Environment Programme (UNEP). It hopes this FAO program will be implemented.

Agenda Item X. Joint Meeting with Centers' Directors

Centers' Directors and TAC members discussed at length mechanisms for promoting linkages among:

- (a) centers themselves,
- (b) centers, universities and advanced research institutions in developed and developing countries,
- (c) centers and donors, and
- (d) centers and national programs.

The following were the major conclusions arising from this discussion:

(1) Mutually beneficial relationships are growing among the international centers and between international centers and national programs. These bonds should continue to be nurtured and strengthened;

(2) IARCs should continue to develop collaborative research projects with national research systems in developing countries; in particular, effective use of "hot spot" locations for major pest and diseases could be utilized in this manner;

(3) CGIAR should encourage bilateral donors to provide funds directly to advanced research institutions in developing countries for collaborative research and not channel the funds through IARCs;

(4) IARCs should not assume the role of grant-giving agencies so that they do not lose their essential character of research institutions;

(5) Communication between IARCs and research institutions in developing countries should not be confined only to a few major and institutions but should extend to the many small and active centers found in these countries;

(6) Training programs need to be expanded for providing developing countries with more research leaders. While at their main campuses IARCs could concentrate on organizing trainer's training programs, they could organize jointly with national institutions' training programs for enlarging the training base. In this respect, the training programs organized by CIMMYT jointly with national research systems and bilateral donors on the control of wheat diseases is a good example. TAC was also informed that financial support for training doctoral and post-doctoral candidates is tending to decline. This trend needs to be arrested since the lack of trained manpower is a major obstacle to the development of effective national research systems in several countries.

(7) IARCs could help bilateral donors in identifying suitable national research institutions which, if given appropriate support, could make a substantial contribution to the improvement of food productivity;

(8) Center Directors made the following suggestions concerning Center-TAC interactions:

(a) The centers welcome the quinquennial reviews undertaken by TAC but would suggest more advanced planning of the program of the Review Panel, joint selection of Panel members, and an opportunity to examine the draft report before it is finalized. TAC clarified that it does not look upon the quinquennial review report as an inspection report but more as a joint exercise with centers on reviewing past work and developing broad guidelines for further growth;

(b) The centers welcome TAC meetings being held in different centers. This would help to promote better understanding between TAC members and center personnel. While the 14th meeting of TAC is scheduled to be held at ICRISAT, Hyderabad, India in October 1976, Center Directors would suggest that the 16th meeting of TAC be held at CIAT, Cali, Colombia towards the end of May 1977 or early June 1977.

Agenda Item XI. Review of Centers' Programmes

According to the budget proposals submitted by the Centers to TAC, the total requirement for 1977 comes to \$60.4 million for core operating funds and \$28.8 million for capital expenditure. The details are as follows:

Institute	Budget			
	1976		1977	
	Core	Capital	Core Operating	Capital
CIAT	6.5	1.0	8.6	1.5
CIMMYT	10.7	0.5	11.7	1.6
CIP	3.2	0.9	4.8	1.0
IITA	8.3	2.5	10.3	1.0
IRRI	7.3	1.3	8.7	3.1
ICRISAT	4.9	3.7	5.9	9.0
ILCA	4.1	1.6	6.2	3.4/(5.4*)
ILRAD	2.1	2.8	2.3	3.2
WARDA	0.8	--	1.0	0.5
IBPGR	1.1	--	1.4	0.06
-----				
*Working capital + capital for cooperative programmes				
ICARDA			4.5	4.5
<b>TOTAL</b>			<b>60.4</b>	<b>28.8</b>

TAC was informed by CG Secretariat that according to current indications, the likely availability of funds for 1977 will be about \$80 million, thus leaving a gap of \$9 million. Due to the late receipt of Center budgets, TAC could not go into inter-se priorities and is therefore not in a position at this meeting to assign specific priorities to the new initiatives and proposals for 1977. TAC would therefore suggest the following procedure:

(1) CG Secretariat could ensure that Centers would have available during 1977 adequate budgets to cover the cost of current operations together with the amount needed to offset inflation;

(2) The Center Directors may undertake themselves a detailed exercise on priorities with reference to new proposals for additional funds and make the result of this exercise available to TAC Secretariat by July 1976;

(3) Preferably, new international centers which do not have even the basic infrastructure for fulfilling their research mandate should be accorded priority in meeting the capital budget requirements;

(4) On the basis of a clearer understanding of the availability of funds and the views of CGIAR Review Committee on the determination of inter-se priorities, TAC would be in a position to make concrete recommendations to CGIAR on allocation of funds for each Center at its October meeting.

Agenda Item XII. National Academy of Sciences; Study Report

Dr. Joel Bernstein and Prof. S. H. Wittwer indicated briefly the problem and scope of the study report and sought the views of TAC members on the following three major aspects of the study:

- a) harnessing U.S. R&D capability in agriculture for improving food productivity in developing countries;
- b) strengths and weaknesses of international agricultural networks;
- c) improving the capabilities of research personnel working on food problems in developing countries.

TAC members explained their views on the mobilization of world R&D capability in solving problems of hunger. Suggestions were given on the role the U.S. could play in the global endeavor. Stress was laid on institutional constraints and also on the need for avoiding the proliferation of agencies engaged in international R&D efforts in agriculture.



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F2

DECLASSIFIED

TO: HYATTMANILA  
MANILA

MAR 22 2016

DATE: MAY 4, 1976

WBG ARCHIVES

ORIGINATOR'S EXT.: 3592

COUNTRY: PHILIPPINES

CLASS OF SERVICE: TELEX: 3344

CA

CABLE NO. & TEXT:

PAGE 1 of 2

PERSONAL FOR COULTER ALPHA CRAWFORD HAS HAD RETURN HOSPITAL FOR FURTHER EMERGENCY SURGERY MAY FIVE STOP HE WILL NOT BE ABLE ATTEND TAC MEETING WHICH NATURALLY CAUSES HIM GREAT CONCERN STOP HE PARTICULARLY CONCERNED ABOUT PRIORITIES QUESTION SINCE ORAM WILL NOT ATTEND EITHER STOP CRAWFORD HAS ASKED HOPPER TO HELP ON THIS MATTER STOP CRAWFORD HAS REQUESTED YOUR PRESENCE THROUGHOUT TAC MEETING TO HELP ESPECIALLY ON CENTERS PROGRAMS STOP HE HAS ASKED SWAMINATHAN TO ASSUME CHAIR AND WILL SUGGEST MAHLER AND/OR SWAMINATHAN VISIT HIM IF THOUGHT NECESSARY AFTER MEETING TO REVIEW RESULTS STOP HE FULLY EXPECTS BE AVAILABLE FOR CENTERS WEEK AND CG MEETING BUT SAYS WILL NEED SWAMINATHAN'S PRESENCE AT CG MEETING AT LEAST STOP PRESUMABLY CRAWFORD WILL ATTEND REVIEW COMMITTEE MEETING BETA WE HAVE ASSURED CRAWFORD YOU WILL BE PRESENT THROUGHOUT TAC MEETINGS AND WILL PROVIDE ALL HELP YOU CAN STOP MY IMPRESSION IS THAT WITH POSSIBLE EXCEPTION OF CIAT CENTERS DO NOT HAVE SIGNIFICANT INNOVATIONS IN 1977 CALLING FOR TAC REVIEW SO THIS ASPECT OF TAC PROCEEDINGS SHOULD TAKE VERY LITTLE TIME STOP THERE IS SOME RISK SESSIONS WITH EACH CENTER DIRECTOR WILL BECOME PRO FORMA AND DETERIORATE INTO GENERAL BUT SUPERFICIAL PROGRAM REVIEW STOP THIS HARDLY LIKELY IMPROVE DIRECTORS ESTEEM FOR TAC THOUGH MAY PROVIDE DIRECTORS OPPORTUNITY TO EDUCATE NEW TAC MEMBERS STOP HOPE YOU MAHLER AND SWAMINATHAN CAN INFLUENCE THESE SESSIONS

NOT TO BE TRANSMITTED

REFERENCE:	AUTHORIZED BY (Name):
Files:F-2	Michael L. Lejeune
DRAFTED BY:	DEPARTMENT:
MLejeune:ia	CGIAR Secretariat
CLEARANCES AND COPY DISTRIBUTION:	SIGNATURE (Of individual authorized to approve):
	SECTION BELOW FOR USE OF CABLE SECTION
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IBRD  
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TO: HYATTMANILA  
MANILA

DATE: MAY 4, 1976

ORIGINATOR'S EXT.: 3592

COUNTRY: PHILIPPINES

CLASS OF  
SERVICE: TELEX: 3344

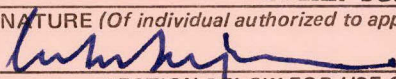
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PAGE 2 of 2

TO KEEP DISCUSSION FOCUSED BRIEF AND PRODUCTIVE STOP IRRI AND CIMMYT  
SESSIONS BECAUSE OF QUINQUENNIAL REVIEWS WILL NATURALLY BE MORE SEARCHING  
GAMMA TAC'S VIEW OF ITS RELATIONSHIP WITH REVIEW COMMITTEE AS EXPRESSED  
IN MCNALLY'S NOTE ON FEBRUARY DISCUSSION THIS SUBJECT SITS WELL STOP HOPE  
NO SIGNIFICANT ADVERSE CHANGE WILL EVOLVE IN CRAWFORD'S ABSENCE STOP PLEASE  
WATCH CAREFULLY DELTA FURTHER DISCUSSION WITH FAO ON CRAWFORD'S SUCCESSOR  
WILL REOPEN SHORTLY STOP WILL KEEP YOU AND RITCHIE INFORMED STOP IF MAHLER  
HAS NEWS PLEASE INFORM ME SOONEST STOP PLEASE ACKNOWLEDGE RECEIPT THIS CABLE  
REGARDS

LEJEUNE

NOT TO BE TRANSMITTED

REFERENCE: <b>Files:F-2</b>	AUTHORIZED BY (Name): <b>Michael L. Lejeune</b>	
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INCOMING TELETYPE

1976 MAY -3 AM 9:18

JAC Meeting  
J-2

Distribution:

From: Gabbera

Mr. Baum

WORLDBANK

SOPAC AAG2694  
(Telex Nr.)

ATTENTION BAUM

(1) REGRET IN FORM YOU HAVE HAD TO RETURN TO HOSPITAL FOR FURTHER URGENT SURGERY WEDNESDAY 5TH MAY. THIS MAKES MY SCHEDULED PROGRAMME FOR TAC INDIA AND TEHRAN QUITE IMPOSSIBLE.

(2) SPECIFICALLY ~~ABSENCE~~ FROM TAC IS CRITICAL AND EFFECT WORSENER BY NON ATTENDANCE OF GRAM IN PRIORITIES QUESTION. HAVE ASKED HOPPER TO HELP ON THIS ITEM. WOULD APPRECIATE COULTERS PRESENCE THROUGHOUT TO HELP ESPECIALLY ON CENTRES PROGRAMMES. EYE HAVE ASKED SWAMINATHAN TO ASSUME CHAIR AND WILL SUGGEST MAHLER AND/OR SWAMINATHAN VISIT ME IF THOUGHT NECESSARY AFTER MEETING TO REVIEW RESULTS.

(3) EYE FULLY EXPECT TO BE AVAILABLE FOR CENTRES WEEK AND CONSULTATIVE GROUP BUT NEED SWAMINATHAN'S PRESENCE AT CG MEETING AT LEAST.

(4) HAVE TELEXED STERN AND PICCINITO RE INABILITY TO KEEP MY PROGRAMME.

REGARDS CRAWFORD

F 2

April 21, 1976

Dear Sir John:

You will have heard from Bruce Cheek about the meeting on post harvest technology held in Leon Hesser's office on April 14.

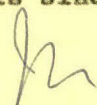
There was emphasis that TAC should be kept informed of these developments and I, as the only one present who would be attending the May meeting of TAC, was asked to act as spokesman. Consequently, I would be grateful if you could find a few minutes, at some stage in the agenda, to let me do so.

During his travels in the area, MacHardy, the IDRC consultant, met with Joe Madamba, so he will be familiar with the activities.

We have had good news here of your excellent recovery and we wish you continuing progress.

With best regards,

Yours sincerely,



John K. Coulter  
Scientific Adviser

Sir John Crawford  
32 Melbourne Avenue  
Deakin, Canberra, A.C.T. 2600  
Australia

File F-2

JKCoulter:apm

*low 3/10/13  
in context  
J-2*

**CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
TECHNICAL ADVISORY COMMITTEE**

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Via delle Terme di Caracalla, 00100 Rome, Italy

Cables: FOODAGRI ROME - Telex: 61181 FOODAGRI

Telephone: 5797

6th April, 1976

APR 15 1976

PR 3/10.13

To: All Centres' Directors

From: *for* The Executive Secretary, TAC *Michael L. Lejeune*

Subject: 13th Meeting of the Technical Advisory Committee to the Consultative Group on International Agricultural Research.

I should like to refer to Item 10 of the Agenda of the above meeting which will be a joint meeting of TAC and the Centres' Directors in accordance with established practice at the summer meeting of TAC.

On this occasion the Chairman, Sir John Crawford, would like to examine with the Directors, three topics, which together comprise Item 10; they are:

- (i) Use of advanced institutions, including ICIPE, by Centres;
- (ii) Donor Country/IARC relations (with particular reference to outreach and special project support);
- (iii) Cooperation between Centres.

It would be appreciated if Centres could provide the Committee with pertinent background information on these topics, indicating the extent to which advanced centres in other countries are utilized and the nature of working agreements with those centres in respect of both 'core' and 'outreach' research activities; the extent of, and finance involved in, individual donor country or organization support to outreach, especially through "special project" activities; and the current working arrangements for cooperation between individual centres.

The Secretariat has already compiled data on some CGIAR donor members activities in support of research at both the international and national level and has requested data on the availability of specialized institutions, wherever they may be situated, which might be mobilized to the assistance of both the international centres and national programmes. An information base is aimed at, which would provide much needed guidance in the matching of needs and opportunities, in the streamlining and systematizing of relationships through the establishment of criteria and channels for dialogue, and in the ultimate better distribution of finances.

Your comments on the above and inputs to the planned discussion, will be greatly appreciated.

Mr. Michael L. Lejeune  
CGIAR  
1818 H Street, N.W.  
Washington, D.C. 20433  
U.S.A.

✓ F-2  
APR 12 1976

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH

TECHNICAL ADVISORY COMMITTEE

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Via delle Terme di Caracalla, 00100 Rome, Italy

Cables: FOODAGRI ROME - Telex: 61181 FOODAGRI

Telephone: 5797

PR 3/10.13

April 5, 1976

TO: Members of the Technical Advisory Committee  
Members of the Consultative Group on International Agricultural Research  
Directors of the International Agricultural Research Centres

FROM: *for* The Executive Secretary, TAC *[Signature]*

SUBJECT: Thirteenth Meeting of the Technical Advisory Committee

1. The 13th Meeting of the Technical Advisory Committee will be held at headquarters of the International Rice Research Institute (IRRI), Los Baños, Philippines, from 8 - 13 May, 1976.
2. The Provisional Agenda for the meeting is submitted herewith. This has been arranged so that the five major items (Nos. 3-7 inclusive), a joint meeting of Centres' Directors and the review of most Centres' programmes, can be covered before Wednesday night when the Chairman has to leave Manila. The Chairman will endeavour to complete all of Agenda Item 11, and thus include that part presently set down for Thursday, 12 May, in his summing-up on Wednesday afternoon. At present, however, on the basis of the anticipated time required for each item, it has been necessary to set down part of Item 11 provisionally for Thursday, 13 May, when the Deputy-Chairman, Dr. M. S. Swaminathan, will Chair the meeting.
3. Please note that members of the TAC Subcommittee on Plant Nutrition and Grain Legumes should endeavour to reach Manila at the latest during the evening of Wednesday, 5 May. Other TAC members are expected to arrive in Manila during Friday, 7 May, to take part in the visit to the IRRI research farm and laboratories.
4. Details of the agenda of the two-day meeting of the Plant Nutrition and Grain Legumes Subcommittee, and the itinerary of the IRRI tour will be forwarded to TAC members as soon as these become available.
5. For the information of participants who have not previously visited IRRI, the Institute is situated some 50 Km. from Manila, in the Province of Laguna, adjacent to the campus of the University of the Philippines' College of Agriculture.
6. In view of the rather limited accommodation at Los Baños, members and observers anticipating attending are requested to inform both this office and the Director of IRRI as soon as possible of their intentions to attend and their ETA's and flight numbers to facilitate transportation. The address of IRRI is: P.O. Box 933, Manila; cable: RICEFOUND, Manila.
7. For the information of TAC members, air tickets will be issued prepaid in the usual way.
8. Members of the Consultative Group are reminded that they are free to appoint a single observer each to attend OPEN sessions of the TAC.
9. If you have any comments or enquiries to make I should be grateful if you would cable me.

April 5, 1976

CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH  
TECHNICAL ADVISORY COMMITTEE

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

Via delle Terme di Caracalla, 00100 Rome, Italy.

Cables: FOODAGRI ROME - Telex: 61181 FOODAGRI

Telephone: 5797

13TH MEETING

IRRI Headquarters, Los Baños, Philippines, 8 - 13 May, 1976

PROVISIONAL AGENDA <sup>1/</sup>

Saturday, 8 May

There will be a visit to IRRI's research fields and facilities on Saturday, 8 May. (Itinerary to be arranged by Dr. Brady and staff.)

Sunday, 9 May

09.00 - 13.00

Morning Session OPEN

- Item 1 Adoption of the Agenda.
- Item 2 Adoption of the Reports of the 11th and 12th Meetings.
- Item 3 CIMMYT Quinquennial Review. Preliminary report of the TAC Mission (TAC Executive Secretary and Dr. Blumenschein).
- Item 4 Water Buffalo Research. Report of the TAC Expert Consultation, Singapore, 9 - 13 March, 1976 (Dr. Madamba).

14.30 - 18.00

Afternoon Session CLOSED

- Item 5 Priorities for Research. Discussion of Final Revision TAC Priorities Paper and formulation of recommendations (Chairman).
- Item 6 IRRI Quinquennial Review. Discussion of Final Draft Report of the TAC Mission and formulation of recommendations (Dr. Swaminathan).

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<sup>1/</sup> The TAC Subcommittee on Grain Legumes and Plant Nutrition will meet on Thursday and Friday, 6 and 7 May at IRRI. A separate agenda for this meeting will be issued.

5/4/76

- 2 -

Monday, 10 May

09.00 - 11.00

Morning Session CLOSED

Item 7 Vegetable Research. Discussion of Options Paper and formulation of recommendations (TAC Secretariat).

Item 8 Grain Legumes and Plant Nutrition. Discussion of Subcommittee's report and formulation of recommendations (Drs. Ruttan and Swaminathan).

Item 9 Other Business

(a) CGIAR and TAC Reviews - Progress Report (Chairman).

11.15 - 13.00

Morning Session OPEN

Item 10 Joint Meeting with Centres' Directors. Discussion of:

- (i) Use of advanced institutions, including ICIPE, by Centres;
- (ii) Donor Country/IARC relations (with particular reference to outreach and special project support);
- (iii) Cooperation between Centres.

14.30 - 18.00

Afternoon Session CLOSED

Item 11 Review of Centres' programmes: <sup>1/</sup>

(a) IRRI                      (b) WARDA                      (c) CIAT

Tuesday, 11 May

09.00 - 13.00

Morning Session CLOSED

Item 11 (cont.) Review of Centres' programmes:

(d) ICRISAT                      (e) CIMMYT

14.30 - 18.00

Afternoon Session CLOSED

Item 11 (cont.) (f) IITA                      (g) IBPGR                      (h) CIP

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<sup>1/</sup> The present agenda shows Items 11 (i) ICARDA (progress report); 11 (j) IIRAD and 11 (k) ILCA to be taken on Thursday morning, 13 May. If time permits the review of these Centres' programmes will be made before closure of the afternoon session of Tuesday, 11 May and thus will be included in Items 13 and 14.



Wednesday, 12 May

09.00 - 11.00

Morning Session OPEN

Item 12

National Academy of Science. Study Report (Dr. J. Bernstein).

11.15 - 13.00

Morning Session CLOSED

Item 13

Formulation of recommendations on Items 3,4,10 and 11 (or greater part thereof).

14.30 - 18.00

Afternoon Session OPEN

Item 14

Chairman's summing-up on Items 3,4,5,6,7,8,9(a), 10,11 (or greater part thereof), and 12.

Thursday, 13 May

09.00 - 13.00

Morning Session CLOSED

Item 11 (cont.)

Review of Centres' programmes:

- (i) ICARDA (progress report)
- (j) ILRAD
- (k) ILCA

Item 9 (cont.)

Other Business:

- (b) Soya bean - progress report (TAC Secretariat).
- (c) Aquaculture - progress report (TAC Secretariat).

Item 15

Formulation of recommendations on 9(b), 9(c), 11(i), 11(j), and 11(k).

14.30 - 18.00

Afternoon Session OPEN

Item 16

Chairman's summing-up on Items 9(b), 9(c), 11(i), 11(j), and 11(k).

Item 17

Date and Place of Next Meeting.

F2

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- IFC
- ICSID

TO: WEBSTER  
TAC  
FOODAGRI  
ROME  
COUNTRY: ITALY

DATE: MARCH 29, 1976

ORIGINATOR'S EXT.: 3454  
TELEX  
CLASS OF 61181  
SERVICE:

*Lc*

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HAVE NOT YET RECEIVED COPIES OF THE DRAFT IRRI REVIEW MISSION REPORT DRAFT  
REVISED PRIORITIES PAPER OR RUTTAN PAPER DISCUSSED AT FEBRUARY TAC MEETING STOP  
GRATEFUL IF YOU COULD DESPATCH COPIES SOONEST STOP

REGARDS  
RITCHIE

NOT TO BE TRANSMITTED

REFERENCE: DanielRitchie/ms/F2	AUTHORIZED BY (Name): Daniel Ritchie
DRAFTED BY: Daniel Ritchie	DEPARTMENT: CGIAR Secretariat
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MAR 29 4 06 PM 1976

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OFFICE: [Signature]

REPORT: [Signature]

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KLCHN

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TO: WEBSTER  
FOODAGRI  
ROME

DATE: MARCH 22, 1976

ORIGINATOR'S EXT.: 3454

COUNTRY: ITALY

CLASS OF SERVICE: TELEEX 61181

CABLE NO. & TEXT:

PAGE ONE OF TWO

L/C

DDD RE DRAFT AGENDA 13TH TAC MEETING PLEASE AMEND AS FOLLOWS  
 AAA POSTPONE ITEM G B SOYA AND AQUACULTURE TO THURSDAY 13TH MORNING AND MOVE ITEM 10  
 TO MONDAY MORNING 10TH INSERTING NEW SUBITEM QUOTE COOPERATION BETWEEN CENTERS UNQUOTE  
 AFTER SUBITEM 10 III DONOR COUNTRY IARC RELATIONS BBB ITEM 11 MONDAY AFTERNOON IIRI  
 WARDA CIAT TUESDAY MORNING ICRISAT CIMMYT AFTERNOON IITA IBPGR CIP CCC WEDNESDAY  
 MORNING ICARDA ILRAD ILCA AFTERNOON FOR FORMULATION OF CONCLUSIONS ON ITEM 11 AND  
 CHAIRMAN'S SUMMING ON ITEMS 2.3.4.5.6.7.8.9A.10.11 DDD VICE CHAIRMAN TO PROCEED THEN  
 WITH ITEMS 12, 9B AND C AND 15 AS REQUIRED ON THURSDAY 13 MAY STOP ITEM 15 DATE AND  
 PLACE NEXT MEETING STOP IF NEEDED PLEASE PHONE ME C/O LEJEUNE BEFORE WEDNESDAY 24TH  
 FOR CLARIFICATION STOP PLEASE SEEK BRADY'S UNDERSTANDING OF AMENDED AGENDA  
 EEE HAVE READ DRAFT SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS AND HAVE ONLY FOLLOWING  
 ALTERATIONS TO REQUEST AGENDA ITEM 3 LINE 2 OMIT WORDS QUOTE A JOINT UNQUOTE AND OMIT  
 UNDERLINING SAME LINE STOP LINE 3 OMIT WORD QUOTE AND UNQUOTE REPLACING IT WITH WORDS  
 QUOTE BASED ON CLOSE DISCUSSION WITH UNQUOTE STOP INSERT WORDS QUOTE DIRECTOR AND  
 UNQUOTE BEFORE WORD QUOTE STAFF UNQUOTE AT END OF SENTENCE STOP FINAL UNDERLINED PARA  
 ON PAGE 1 PLEASE REPLACE WORD QUOTE CHANGES UNQUOTE IN LINE 3 WITH QUOTE COMMENTS UNQUOTE  
 STOP IN LINE 4 INSERT AFTER QUOTE MAKE UNQUOTE THE WORDS QUOTE OR SUGGEST UNQUOTE STOP

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DRAFTED BY: Sir John Crawford	DEPARTMENT: CGIAR Secretariat
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TO: WEBSTER  
FOODAGRI  
ROME

DATE: MARCH 22, 1976

ORIGINATOR'S EXT.: 3454

COUNTRY: ITALY

CLASS OF SERVICE: TELEX 61181

CABLE NO. & TEXT:

PAGE TWO OF TWO

AGENDA ITEM 6 PAGE 10 LINE 4 UP FROM BOTTOM QUOTE WORLD TERMS UNQUOTE SHOULD  
READ QUOTE REAL TERMS UNQUOTE STOP  
FFF AM CONCERNED NON-INVITATION TO MCCUNE AND HATHAWAY TO MEET TAC MEMBERS AND  
CENTER DIRECTORS STOP ESPECIALLY IMPORTANT MCCUNE REPORT HIS PROGRAM TAC AND I  
WOULD THINK TO DIRECTORS STOP TAC HAS NO OPPORTUNITY CENTERS WEEK STOP HATHAWAY LESS  
CRITICAL BUT AS IFPRI A TAC PRODUCT SUGGEST WE OUGHT TO HEAR FROM HIM INFORMALLY AT  
LEAST STOP PLEASE ADVISE POSITION AS YOU UNDERSTAND IT STOP  
GGG CONFIRM MY TELEPHONE CONVERSATION AUTHORIZING YOU TO DISTRIBUTE ORAM'S DRAFT  
PAPER ON PRIORITIES TO ALL TAC MEMBERS NOW STOP  
ADDENDUM CONCERNING AGENDA PROPOSALS ABOVE WHICH WERE WORKED OUT WITH MAHLER STOP  
BERNSTEIN INFORMS ME THURSDAY IMPOSSIBLE FOR HIM IN VIEW BANGKOK COMMITMENTS STOP  
NOW SUGGEST WE GIVE HIM WEDNESDAY MORNING FOR MEETING JOINTLY WITH CENTER DIRECTORS  
AND TAC STOP HE CAN CONTINUE WEDNESDAY AFTERNOON WITH CENTER DIRECTORS STOP ANY  
INDIVIDUAL CENTER DIRECTORS TAC FAILS TO DEAL WITH WEDNESDAY AFTERNOON WILL HAVE  
TO STAND OVER UNTIL THURSDAY AM FOR SWAMINATHAN AND TAC STOP PLEASE TRY TO CLARIFY  
WITH BRADY SENDING ME CLEAR AGENDA BY APRIL 14 WHICH DATE I SHOULD LEAVE HOSPITAL

REGARDS

CRAWFORD

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DRAFTED BY:	Sir John Crawford	DEPARTMENT:	CGIAR SECRETARIAT
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F-2

Dr. Donald McCune  
Tennessee Valley Authority  
National Fertilizer Development Center  
Muscle Shoals  
Alabama 35600

March 4, 1976

Dear Don:

I have a copy of Vernon Ruttan's letter to you of February 20. I too would be very interested in any information you have about work at the Sloan-Kettering Institute so I would be grateful for a copy of your reply.

I believe that you plan to attend the TAC meeting at IRRI so I look forward to seeing you there.

With Best regards,

Yours sincerely,

John K. Coulter  
Scientific Adviser

INTERNATIONAL DEVELOPMENT  
ASSOCIATION

INTERNATIONAL BANK FOR  
RECONSTRUCTION AND DEVELOPMENT

F-2  
INTERNATIONAL FINANCE  
CORPORATION

**OUTGOING WIRE**

TO: ORAM  
FOODAGRI  
ROME

DATE: MARCH 3, 1976

CLASS OF  
SERVICE: TELEX NO. 61181  
(Ext. 3592)

*Handwritten initials*

COUNTRY: ITALY

TEXT:  
Cable No.:

KOFFSKY RETURNS IFPRI MARCH TEN. SUGGEST YOU SEND TICKETS HIS HOME  
5515 GREYSTONE STREET, CHEVY CHASE, MARYLAND 20015 REGARDS

LEJEUNE

**NOT TO BE TRANSMITTED**

AUTHORIZED BY:

NAME Michael L. Lejeune

DEPT. CGIAR Secretariat

SIGNATURE *[Signature]*  
(SIGNATURE OF INDIVIDUAL AUTHORIZED TO APPROVE)

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(IMPORTANT: See Secretaries Guide for preparing form)

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~~M. Lejeune~~

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*[Signature]*

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ДЕЛ

Mar 4 1 17 AM 1976

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ПОДПИСАНИЕ

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DATE

1976 03 04

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RECONSTRUCTION AND DEVELOPMENT

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# The Agricultural Development Council, Inc.

Regional English Language Centre International House; 30 Orange Grove Road, Singapore 10, Republic of Singapore

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Mail: Tanglin P.O. Box 84

Singapore 10, Republic of Singapore

Phone: 379075, 379266, 379643

Cable: AGRIDEVEL, Singapore.

February 20, 1976

Dr Sterling Wortman  
Vice-President  
The Rockefeller Foundation  
1133 Avenue of the Americas  
New York, NY 10036  
USA

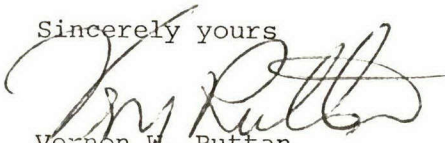
Dear Sterling

It was good to visit with you at the TAC meeting in Rome in early February.

There is one item about which I wanted to check with you that came up later in the week. As you may know, M.S. Swaminathan and I have been serving as co-chairman of a TAC sub-committee on plant nutrition. The earlier work of the sub-committee involves the review of the plans for the International Fertilizer Development Center and a review of proposals to strengthen work on biological sources of plant nutrition.

Among the remaining items on our agenda is (a) the issue of organic matter preservation in use, and (b) the potentials for biological simulation of chemical systems of nitrogen production. Under the latter heading we have, particularly in mind, the work being done at the Sloan-Kettering Institute. I wonder if you or someone else in RF know who would be the appropriate person to contact at Sloan-Kettering about this work.

Sincerely yours



Vernon W. Ruttan  
President

cc: M.S. Swaminathan

VWR/tjk/gml

A/D/C

F-2  
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February 20, 1976

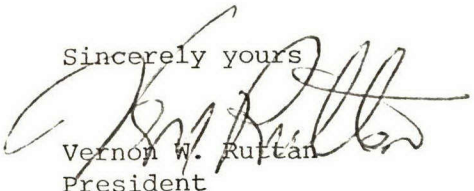
Dr Donald McCune  
Director  
International Fertilizer Development  
Center  
402 First Federal Building  
Florence, Alabama 35630  
USA

Dear Don

The purpose of this letter is to bring you up-to-date on the current activities of the TAC sub-committee on plant nutrition. As you know the first item on the agenda of the sub-committee was related to the establishment of the International Fertilizer Development Center. The second item on the agenda dealt with the role that the international institutes might play in the search for biological sources of plant nutrition. There are still several additional items on our agenda including the issue of (a) organic matter preservation in use and (b) the potential for biological simulation of chemical systems of nitrogen production. During the latter heading we would include the kind of work which is underway at the Sloan-Kettering Institute.

I gather that you and others at the IFDC have been monitoring the Sloan-Kettering work to see if and when they might reach the stage where development work would become productive. If you or your staff have been following this work we would like to invite your participation or the participation of the appropriate staff member to the next meeting of the TAC sub-committee on plant nutrition. The meeting will be held in Los Banos on Friday and Saturday, May 7 and 8, 1976 immediately prior to the TAC meeting with institute directors. If participation from IFDC is feasible I would appreciate hearing from you. You might also want to send a copy of your letter to me to Dr Joseph C. Madamba (Director General, Philippine Council for Agriculture and Resources Research, College, Los Banos, Laguna, Philippines). Dr Madamba will be handling the local arrangements for the meeting.

Sincerely yours



Vernon W. Ruttan  
President

VWR/tjk/gml

cc: M.S. Swaminathan

F-2

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February 20, 1976

To: TAC Sub-Committee on Plant Nutrition

- Dr A. Blumenschein
- ✓ Dr John K. Coulter
- Dr Joseph C. Madamba
- Dr M.S. Swaminathan
- Dr T. Ajibola-Taylor

From: Vernon W. Ruttan



The purpose of this letter is to confirm the dates of the meeting of the next session of the TAC sub-committee on plant nutrition. The meeting will be held in the offices of the Philippine Council for Agriculture and Resources Research (College, Los Banos, Laguna, Philippines). Local arrangements are being handled by Dr Joseph C. Madamba, PCARR Director General. At our meeting in Rome it was agreed that the meeting on May 7 and 8, 1976 will be devoted to three issues: (1) organic matter preservation and use (including such items as a potential household and community bio-gas production; (2) village level fertilizer production (including information based on the Chinese experience); and (3) the potential for biological simulation of chemical systems of nitrogen production (such as the basic work being conducted at the Sloan-Kettering Institute).

I have written letters to Sterling Wortman, Donald McCune, Ruth Zagorin and Joseph Hulse concerning our interest in these matters. Copies of the letters are attached. It is my understanding that M.S. Swaminathan will be contacting the Regional FAO Director Umali in Bangkok concerning information on the Chinese experience in organic matter conservation and village level nutrient production.

...2/

February 20, 1976

Swaminathan will also be identifying contribution from India on bio-gas and use of organic materials.

Dr Taylor has agreed to develop a memorandum on research results and potentials in Africa. Blumenschein has agreed to prepare a similar memorandum relating to Brazil and Madamba has agreed to survey the available material from the Philippines.

I would suggest that any correspondence related to the meeting should be copied to Swaminathan, Ruttan and Madamba. Madamba will, of course, be handling local arrangements.

VWR/tjk/gml

cc: Sir John Crawford  
Peter Oram

Enc:

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February 20, 1976

Dr Ruth Zagorin  
Director, Social Sciences and Human  
Resources

Dr Joseph Hulse, Director  
Agriculture Division  
International Development Research  
Centre  
Box 8500, Ottawa  
Canada K1G 3H9

Dear Ruth and Joe

I am writing to both of you about the work of the TAC sub-committee on plant nutrition which is jointly chaired by M.S. Swaminathan and myself. Over the last couple of years the major items on our agenda have been (a) issues related to the establishment of the International Fertilizer Development Center and (b) the potential role of the international institutes in research on biological sources of plant nutrition. Among the items remaining on our agenda are issues relating to (a) organic matter preservation and use, (b) village level fertilizer production, and (c) potentials for biological simulation of chemical systems of nitrogen production.

It is our understanding that the IDRC is supporting a substantial amount of work relating particularly to issues of organic matter preservation and use in Africa and perhaps elsewhere. If this is correct, the sub-committee would appreciate your help on two counts: First, would it be possible to provide us with a run-down or summary of the work that you have underway and of results that are coming out of this work. Second, would it be possible for someone from the IDRC staff who is familiar with this work to participate in the next meeting of the TAC sub-committee on plant nutrition?

...2/

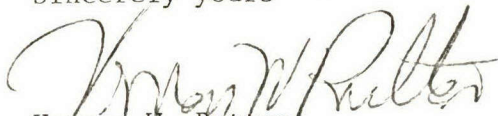
Dr Ruth Zagorin & Dr Joseph  
Hulse, Director

- 2 -

February 20, 1976

The sub-committee will be meeting at the Philippine Council for Agriculture and Resources Research in Los Banos on Friday and Saturday, May 7 and 8, 1976 immediately prior to the TAC meeting with institute directors that begins on May 9 at IRRI. If it is possible for an appropriate IDRC staff member to meet with us, could you send a copy of the reply to me to Joseph C. Madamba at PCARR?

Sincerely yours



Vernon W. Ruttan  
President

VWR/tjk/gml

cc: M.S. Swaminathan



F-2

## OFFICE MEMORANDUM

**TO:** Michael L. Lejeune, Executive Secretary C.G.I.A.R. **DATE:** 12 February 1976  
**FROM:** W.J. MacNally<sup>W</sup>, Assistant to Sir John Crawford  
**SUBJECT:** 12th Meeting of the Technical Advisory Committee

I am attaching copies of Sir John Crawford's summary notes on decisions taken at the 12th meeting of the Technical Advisory Committee, which was held in Rome from 2-6 February 1976.

OFFICE MEMORANDUM

TO: Mr. Tolson, Mr. Boardman, Mr. Nichols, Mr. Belmont, Mr. Mohr, Mr. DeLoach, Mr. Casper, Mr. Callahan, Mr. Conrad, Mr. Felt, Mr. Gale, Mr. Rosen, Mr. Sullivan, Mr. Tavel, Mr. Trotter, Mr. Tele. Room, Mr. Holmes, Miss Gandy

FROM: Mr. [Name], Assistant to the Director

SUBJECT: 1974 Meeting of the Technical Advisory Committee

I am attaching copies of the report of the Technical Advisory Committee (TAC) which was held in Room 5650 from 2-6 through 2-7, 1974. The meeting was held in Room 5650 from 2-6 through 2-7, 1974. The meeting was held in Room 5650 from 2-6 through 2-7, 1974.

TAC will be recommending guidelines  
(Rest of U.S. circumstances)

Note: This is a synopsis for review.

## ADVANCED SCIENTIFIC INSTITUTIONS

The TAC has already suggested that the International Centres should develop contacts with advanced institutes for work on fundamental constraints which limit yields, and on factors of production. Many of the Centres have already established these links and the TAC wishes to discuss with the Centre Directors the ways in which these relationships can be developed. There is also a need to safeguard Centres from an avalanche of requests from universities and institutions for collaborative work and this will be a further matter for discussions with the Directors. The TAC noted with pleasure the developing programme of the National Academy of Science to assist both the International Centres and national research programmes in the developing countries . TAC was aware of considerable help given already by other countries and especially welcomed the information provided by the UK in this respect. In passing TAC expressed its concern that it is not always aware of important scientific support to Centres amounting to projects vital to any appreciation of Centre's work.

TAC also noted the procedures set up by IRRI with Australia to screen requests for collaboration and assistance. TAC feels that procedures of this sort are needed to assist in attracting support which is relevant and complementary to the work of the Centres.

Workman - a real missionary.

No clear cut course - Play it by ear.

Substitute for FSO 13rd ~~etc~~ etc?  
or Coop Program.

Boumer was gracious; but well  
aware of implied criticism of FSO.

INTERNATIONAL AGRICULTURAL DEVELOPMENT SERVICE

At the TAC's invitation Dr Wortman gave the meeting details of the proposed functions of the IADS. At the TAC meeting in Mexico in October, it was thought that IADS would be principally working in the field of strengthening national research, but it is evident from Dr Wortman's presentation that the IADS's main objective is to assist national governments prepare alternative strategies for production and development although it will concern itself if necessary in national research and its application to increased production. The TAC welcomes this initiative, which is apparently being followed also by other countries, as a valuable means of supplementing the wide range of project and technical assistance now given by several international agencies, such as FAO and also by bilateral donors in support of enhanced farm production. The IADS work could also help to complement the research programmes of the international centres e.g. in outreach activities. TAC wishes the new organisation well.

Marciano's team recommended a center,  
but the majority of IAC were against.

Tomatoc & Amaratth.

Ignacio AUDE.

and Melchior Report x

likely outcome is strengthening  
existing centers - probably national.

## VEGETABLE RESEARCH

The proposals made by Dr Marcano and his colleagues were considered by the TAC in the light of the activities currently being undertaken by the AVRDC and the Reckefeller proposal for a single centre to conduct vegetable research.

It is now apparent that TAC made the correct decision in having a mission to appraise the need for additional internationally supported research on vegetables for the tropics, for without doubt we could not have reached the present stage of crystallisation of the problem areas to be considered.

In this respect, Dr Marcano and his team must be congratulated on their effort under difficult circumstances which include particularly a marked lack of substantial data.

There appears to be little doubt of the need for an internationally supported effort to strengthen vegetable research but it remains unclear as to how this should be effected, and a number of important issues have yet to be resolved. Amongst these the most important is what is the most appropriate form that this international effort in vegetable research should take.

TAC appreciates the strength of the reasons given in the report supporting the establishment of a new international centre of limited size in combination with a network approach. But at this stage, the majority of TAC do not find a clear case for a single centre.

Alternative approaches suggested include

- (a) utilising one of the existing International Centres as the main coordinating research location in a network of national institutions
- (b) merely developing and strengthening a network of national research institutions with one of them as the main coordinator

and principal seat of the research effort

- (c) the creation of an International Vegetable Research Board for tropical developing countries which would identify research needed to remove the major constraints to increasing vegetable production in selected species, channel funds to its support at appropriate institutions, monitor their utilisation, and report to the CGIAR.

Other unresolved but important points are

- (a) determination of the correct order of priorities among the many plant species used as vegetables in the tropics.
- (b) the related question of real significance of the various kinds of vegetables in the diet and the nutrition of both the rural and urban populations. A difficulty is that several species widely consumed in traditional diets have received very little research of any kind.
- (c) the relative importance for research various problems - yields, disease etc - having regard, of course, to the wide variation in ecological conditions, once the priorities among the species have been determined. Here the decisions to be taken depend on having more information on the specific constraints to increased production. Pest and disease problems rank high but there exist more fundamental problems which will require attention. Emphasis was also placed on post harvest technology, primarily storage and probably dehydration.
- (d) the need to consider vegetable research in other ecological regions such as the semi arid and sub tropical areas as well as in the more humid tropics stressed in the report.



The TAC secretariat was asked to proceed with the preparation of a paper on issues raised in the mission report and at this meeting adding further pertinent information where possible to help in decision making and providing TAC with a series of options for discussion at the May meeting. In view of the several approaches to organisation of vegetable research, TAC requires a pro and con review of them. In its further deliberations, TAC will also take full account of the experience gained in the Asian Vegetable Development Centre in Taiwan.

1. Has to fend off FAO advanced review.

Albani - probably source of FAO attempt, but a characterless Onals keep.

2. He will not alter the mission report, but may comment on and supplement.

3. "Specialist" report - with now sort out priorities.

## IRRI QUINQUENNIAL REVIEW

It is important to understand that the review was not an inspection but a joint examination of the accomplishments and future programmes of IRRI, undertaken by the TAC team and IRRI staff.

The draft report was presented to TAC by the mission leader, Dr Swaminathan. The mission comprised two TAC members, 5 outside scientists and Mr Webster of the TAC secretariat.

TAC considered that the report was of excellent quality. Suggestions regarding the style and wording of the report were made but the substance of the report remains the prerogative of the mission members. Any substantive points TAC wishes to make will be made as part of the presentation of the report to the CGIAR meeting in July.

A revised draft of the report will be submitted to all team members by 23 February and the members have until March 15 to comment on the revised draft. Dr Swaminathan, Dr Pereira, Dr Brader and Mr Webster have agreed on a revised draft for this purpose. The final report will be submitted to the Chairman by 21 March.

There was complete agreement that the quality of the report set a high standard and very satisfactorily initiated the sequence of TAC quinquennial reviews. The final position of TAC with respect to the report would be expressed at the next meeting in May and would be incorporated into the proceedings of that meeting. The preliminary reactions of the Committee indicated however a high level of agreement with the substance of the report and there is a strong likelihood of unanimous acceptance.

Specific issues raised included the following

- the need for the review team to reach agreement on priorities within its own list of recommendations, particularly with respect to new

senior staff positions to strengthen the research staff.

- a need to clarify the proposals for capital installations, particularly those for the storage of germplasm collections and the routine work of the Genetic Evaluation and Utilisation team.
- some emphasis was felt to be needed with respect to the recommendations made by the team on Agricultural Engineering Research and Post Harvest Technology research. It was felt desirable to stress that the ideas expressed by the mission in support of agricultural engineering research were in full accord with the views already expressed by the TAC in response to the earlier report on the machinery programme. These were to the effect that increased mechanisation of rice cultivation should not lead to any displacement of labour - what is needed from mechanisation is a higher final yield of the harvest product i.e. more rice rather than less labour. In this connection the need for closer integration and collaboration with the farming systems and constraints programmes was stressed.
- the review team had, in the opinion of the Committee, correctly treated the Cropping Systems programme as a new venture, still in its infancy, but felt nevertheless that a clearer rationale might be spelled out for this research activity, and that a proposal for IRRI to initiate coordinated systems work with other centres be clarified

- a further point was made regarding the need to clarify the recommendations with respect to the allocation of resources to upland (non banded) rice research, which at present appeared to be somewhat ambiguous. This is being examined by the team "drafting committee".
- The Chairman reiterated his personal satisfaction with the report of the TAC team, which has splendidly initiated the review activities.

Oraun's paper a commentary on  
original paper.

Cramer's doesn't think Investor ranks high

Post-harvest -  
Centers limited to village level  
But that does not go to question of  
role of CG.

Cotton - They will produce.

Cow nut - Cancellation of Oraun's planned  
work (Is that PAB or IAC budget?).

## TAC PRIORITIES

While members generally gave a favourable reception to the revised and updated draft of the TAC's 1973 Priorities paper, a number of suggestions were offered for amendments which require further discussion at the May meeting. The main items referred to are the following;

### Post Harvest Technology

There was some feeling in the discussion in the paper required elaboration; first to reiterate TAC's point of view that the work of the Centres should be confined to the farm and village level; second to indicate its general interest in research on the wider aspects of this field of research, concerning which an exchange of views with the Chairman of the CGIAR coordinating group is proposed.

### Forestry

While agreeing that research on forest farm systems development might be appropriate at certain international centres e.g. IITA, and that there were a number of other problems relating to forestry requiring study, the TAC was not disposed to give forest research as a whole higher priority without knowing much more about the existing facilities and needs. It therefore welcomed the study being undertaken by IDRC on current forestry research in developing countries, and expressed a wish to see this report before proceeding any further in this matter. At present, forestry does not rank in its top priority list.

### Cotton

Although the TAC had indicated at its last meeting some change of mind in respect to the priority allocated to crops not grown primarily for food, especially cotton, doubts were expressed now as to the importance to be attached to the latter. This was primarily because some members argued that this crop was already receiving considerable support in developing countries.

It was therefore agreed to seek a better evaluation of what is currently in progress before making a final recommendation as to the degree of priority to be accorded.

#### Coconut

This crop is rather a similar position to cotton. While recognising that there are a number of difficult research problems, and that the crop has a major socio-economic importance in certain areas, the TAC wishes to know more about the gaps in research and how best to approach them before proceeding. It was proposed by members that an international workshop to assess these facts be sponsored by TAC, and it was agreed that this should be attempted subject to a review of TAC budget commitments at the May meeting.

#### Climate, weather and crop growth

There was a general feeling that the International centres should be devoting more attention to relations between weather, soil moisture availability and crop growth, and that work on this should be expanded.

#### Vegetables

Here it was felt that the TAC was moving to a position where it would wish to recommend reinforcement of existing research, but it was not yet ready to give it a specifically higher priority until the issues raised in the report of the vegetables mission and TAC's subsequent discussions had been further examined and digested.

In any case this would depend on the acceptance of an assumption that funds from the CGIAR are not severely limiting to the expansion of the system as a whole, so that any additional support for vegetables would not be at the expense of high priority programmes of existing International Centres.

Some members expressed concern at possible overlaps between the CGIAR and the CGFPI in respect for support for national research. It was agreed that this should be a matter for consideration by the Review Committee and



the CGIAR itself. Likewise, our strong support for socio-economic research emphasising the need for investment to translate the results of research into action may well point to a proper role for the CGFPI.

Several members felt that the subject of applied nutrition research should receive more recognition in the next draft. It was agreed that TAC should be better informed on any linkages the Centres had to other institutions in this field and what their attitudes were, as well as to moves afoot to set up an international programme of applied nutrition research outside the CGIAR.

Additional matters to which it was suggested that more attention should be paid by the TAC was the improvement of plantains/bananas, and of the neglected goat.

Attention was drawn to the need to distinguish between a need at a neglected field of research and a priority justifying a recommendation for support from the CGIAR. Resources should be concentrated on critical fields where reinforced effort seemed likely to give a relatively rapid payoff. Some members saw dangers of pressures on TAC to widen its priorities too far. It was, however, accepted that while TAC was in no way bound to recommend a proposal in an appropriate field of research for support from CGIAR, this did not preclude it from drawing it to the attention of potential bilateral donors.

There was a general feeling that a knowledge of TAC's activities, criteria, methodology, and approach to defining priorities should be more widely known, and that inter alia this would be of value to the CGIAR review committee. This should be in a separate document to that on priorities. Similarly, the TAC's views on the possible future financial magnitudes of support required from the CGIAR should be presented in a separate paper in line with TAC's recommendations as to priorities.

The paper considered at this meeting was by way of a commentary

on the original TAC priorities paper ; the paper to be discussed at the May meeting should be a single document incorporating both the earlier TAC views and those now being discussed. Once this had been cleared by the TAC and the final draft circulated to the CGIAR merit was seen in giving this wider exposure as a means of stimulating comment and further ideas on priorities. The paper will also be a major input to the work of the Review Committee.

Mollat

Not likely to be a center. But might  
establish a network of national offices

## WATER BUFFALO RESEARCH CONSULTATION

The TAC was concerned at the delayed response to formal proposals for an International Buffalo Research Centre received from Pakistan and the Phillipines. The earlier discussion at TAC pointed to the need for regional and national support than to a single research centre.

A TAC sponsored expert consultation has been organised for 10-12 March in Singapore and Asian countries with buffalo research programmes and Egypt have been asked to send representatives. The TAC was also pleased to note Brazilian interest in this consultation and their willingness to participate.

The participants will indicate the status of buffalo research in their countries and suitable mechanisms to coordinate this research will be discussed, including specifically mechanisms which might lend themselves to international support.

Various options would be presented , including the proposals already submitted to TAC.

Following the meeting, its report and any proposals evolved would be submitted to the May meeting of TAC, which in turn would report its conclusions to the Consultative Group in July. The Chairman promised a conclusion on this matter

Cranford ventrals hinds

enlarge - what are they

## AQUACULTURE

Aquaculture is an important part of the total food supply, both by production at inland and marine fisheries and as part of mixed farming systems. The TAC is uneasy that research may not be effectively meeting needs although it still appears that the principal constraint is lack of trained scientists. Clear emphasis therefore needs to be given to training but TAC also needs further information on the work being done in the Phillipines and India in collaboration with IDRC. The Secretariat will obtain information on the experiences of IDRC, India and the Phillipines and also on a study sponsored by the Swiss Government on fish farming in some 30 countries. Aquaculture will be placed back on the TAC agenda.

SUB COMMITTEE ON GRAIN LEGUMES AND PLANT NUTRIENTS

It was agreed that these two committees be reconvened in joint session to review progress in plant nutrition research and to follow up on TAC's earlier discussion, with particular reference to aspects of biological fixation and organic fertilisers. This meeting will be held at IRRI immediately prior to the May TAC meeting, subject to the agreement of Dr Brady.

We will be inviting to the meeting Dr Ruttan and Dr Swaminathan as co-chairmen, with Drs Blumenschein, Madamba and Ajibola-Taylor as additional TAC members, plus selected outside specialists, including the Director of IFDC.

## WEATHER FOOD INTERACTION

The Chairman has received a letter from Dr Dahl of the Massachusetts Institute of Technology drawing attention to research work being done in the field of computer modelling of weather in relation to agriculture. In particular this letter points out the consequences of overgrazing on weather and the weather changes which could accompany major afforestation projects.

Some members felt that this research is adequately covered by institutions outside the CGIAR system and with members agreement, the Chairman proposes to place this matter before the Co-sponsors and Centre Directors to seek their views on whether they regard it as directly relevant to CGIAR sponsored research. The Chairam had personal reservations about its relevance as a single global study to TAC's mandate, although there is a clear need for climate/soil research in the Centres, particularly as this relates to cropping systems. The MIT document does not, however, deal specifically with this issue.



Crawford says he thinks very important  
to do more on water management  
(Israel, etc).

Lead for work as agents.

## WATER RESOURCES

Clearly this aspect of factor oriented research is regarded by TAC as an important matter for further discussion towards reaching some conclusions as to the extent to which Centres should develop research into this field. The Chairman ~~has~~ therefore requested the Secretariat to present a revision of the relevant sections of the priorities paper at the May meeting and also to provide information on the extent to which the Centres are presently conducting research in the general field of water resources, use and management.

The Chairman will also be seeking the assistance of FAO in updating TAC information on world wide developments in the use of water - especially in relation to farming under conditions in which water represents a severe constraint.

Says

THE hours to come back to this,  
was only in October x

Question of location in developing  
country (obscure? IIA?) using  
contractual research