

Second Draft
(for discussion only)

AAJ & OS
28/11/72

MEMORANDUM OF AGREEMENT
BETWEEN
THE INDIAN COUNCIL OF AGRICULTURAL RESEARCH
AND
THE INTERNATIONAL CENTER FOR MAIZE AND WHEAT IMPROVEMENT
FOR
JOINT COOPERATION IN RESEARCH AND TRAINING ON WHEAT
AND MAIZE IMPROVEMENT AND RELATED SUBJECTS

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I. PREAMBLE

A. Mutual Interests and Concerns

The All India Coordinated Maize and Wheat Improvement Projects (AICMIP and AICWIP) respectively of the Indian Council of Agricultural Research (ICAR) and the International Center for Maize and Wheat Improvement (CIMMYT), Mexico, have as their common objectives the conduct of such research and development activities as will eliminate or reduce restraints to the production and utilization of maize and wheat. These objectives can best be attained thru cooperative effort in the following areas:

- 1) The exchange of germ plasm.
- 2) The exploitation of this germ plasm in variety improvement programs designed to enhance yields, quality and resistance to such production hazards as pests and other adverse environmental factors.
- 3) The evaluation of variety material in co-ordinated trials under the varying ecological conditions of India and other parts of the world.
- 4) Monitoring of varieties and breeding materials for disease and pest resistance.
- 5) The design, testing and use of programs for encouraging adoption of farmers of improved technology in maize and wheat production.
- 6) The training of technicians and scientists in relevant disciplines.

7) Maintaining communications thru the exchange of information and scientists, and the conduct of seminars and workshops.

B. Mutual Benefits

Tangible benefits to India of international cooperation with CIMMYT are reflected in dramatic increases in yield of maize and wheat which has accrued to increasing the food stocks and productive capacity of the nation while at the same time adding substantially to the income and employment in the farming community and related agro-industries. ICAR cooperation with CIMMYT has contributed to this development in

1) Supplying short statured, lodging resistant, fertilizer responsive genetic wheat seed stocks introduced into India as varieties and for use in breeding programs as well as maize genetic stock which have been utilized in breeding programs;

2) Assistance in the development of maize and wheat disease surveillance methods useful in the establishment of a warning service for potentially damaging diseases of these crops;

3) Training of Indian scientists;

4) The availability of internationally recognized foreign scientists for special assignments and consultancies, and

5) Financial assistance in local currency and foreign exchange, particularly, for assistance in obtaining equipment and supplies not available in India.

Tangible benefits to CIMMYT of this cooperation are also significant:

1) India is rich in collections of improved genetic material.

2) Directly, and thru CIMMYT, germ plasm and cooperation has been made available by India to many countries and institutions.

3) Useful models have been developed in India for wheat disease and insect survey thru observations on farms, the use of trap crop and breeding nurseries, and these are being adopted wisely by countries having similar problems.

4) The international trials conducted within the framework of the All India Coordinated programs provide the international program of CIMMYT and other cooperators a wealth of valuable information on performance of such material under the diverse conditions obtaining in India.

5) The All India Coordinated projects themselves serve as an example of an efficient mechanism for mobilizing and integrating a country's resources for the conduct of production-oriented research and development and in-service training.

6) The phenomenal rapid spread of new HYV of wheat and to some extent maize has served as an example to other countries not only in the spread of the varieties but also the complementary development of irrigation, fertilizer use modernization and marketing arrangements.

Mutual benefits thru CIMMYT/ICAR cooperation in maize and wheat work, though highly productive in the past, now mandate a new order of collaboration which will be regularized thru this memorandum of understanding.

CIMMYT, an international body with headquarters in Chapingo, Mexico, has as its major objective the removal of obstacles which limit the attainment of rapid increases in wheat and maize yields throughout the world. It is also concerned with protecting the excellent gains made to date. CIMMYT has in its extensive collections the most diverse germ plasm available; has a multi-disciplinary team of internationally known scientists; offers specialized non-degree training in relevant areas and provides financial and technical support, as circumstances permit, to countries concerned with wheat and maize production thru its outreach program. CIMMYT enjoys multilateral support thru a consortium of donor agencies.

II. PURPOSE

The purpose of this agreement is to facilitate cooperation between CIMMYT and ICAR thru:

- 1) the identification of areas and activities of common interest;
- 2) documenting the agreement by appropriate policy bodies of CIMMYT and ICAR to the general principle of cooperation in these areas and activities; and
- 3) setting forth procedures to be observed in negotiating cooperative activities under this agreement.

III. AREAS OF COOPERATION

ICAR and CIMMYT have had informal cooperation in several areas and specific activities in recent years. This experience, while useful in recent years, now needs to be formalized to support maximum progress in achieving the common mission of ICAR and CIMMYT through cooperative effort. Between these two dynamic programs, promising new areas for additional cooperation will emerge from time to time.

It is projected that cooperation between the ICAR and CIMMYT will be in the following or closely allied areas:

- 1) The free exchange of wheat and maize genetic material consistent with the plant import/export policies of the Governments of India and Mexico or such third countries as may be concerned.

- 2) The conduct of cooperative research and development work with maize and wheat. Examples include the conduct in India of international trials, nurseries and surveys of plant diseases, insects, methods and techniques, and the factors affecting production, and the evaluation by or thru CIMMYT with the cooperation of Indian scientists of genetic material methods and techniques supplied on behalf of India.

- 3) The training of personnel in India or CIMMYT in wheat and maize, genetics and breeding, physiology, biochemistry, plant protection, agronomy, milling, utilization, economics and related areas including cropping systems involving these crops and methods

and techniques. The nature and duration of training will need be determined mutually by circumstances but may include short-term, in-service training for technicians and post-doctoral trainees at CIMMYT or in India of a non-degree nature. Under special circumstances degree or graduate degree training may be arranged in India or provided by CIMMYT through its relationship with degree granting institutions.

4) The free exchange of scientific information, methods and techniques between ICAR and CIMMYT.

5) The establishment on a continuing basis of scholarly exchange thru sponsoring a program of visiting scientists and other specialists between ICAR and CIMMYT.

IV. IMPLEMENTATION

A number of cooperative activities between ICAR and CIMMYT have been in effect for several years. These are accepted as mutually useful and their continuation is sanctioned.

The following general procedures will be observed in the renewal of ongoing and the negotiation of expanded areas or activities as these are identified.

1) The initiative for identifying potential areas or activities for cooperation may be taken either ICAR or CIMMYT.

2) Approval of cooperative activities rests with the Directors General of CIMMYT and ICAR, under procedures approved by the CIMMYT Governing Board and GOI.

3) Cooperative activities so developed will make reference to and become the work plans under this agreement.

A. RESPONSIBILITIES OF CIMMYT

CIMMYT will give special attention to constraints to maize and wheat production in India with particular reference to:

1) The supply of germ plasm and variety material considered to be useful to India.

2) The training of such Indian personnel in maize and wheat as may be mutually agreed.

3) CIMMYT will provide the salaries, perquisites and international and local travel of scientists provided by them under this agreement.

4) CIMMYT may contribute to the costs of such mutually agreed projects including local or foreign currency for salaries, operations, travel and the purchase of equipment and supplies in conformity with procedures observed by the Government of India for accepting assistance.

5) CIMMYT will accommodate visiting scientists deputed by ICAR under this agreement and this will include providing field plot laboratory, green house, and library facilities as well as opportunities to visit production situations in the countryside.

B. RESPONSIBILITIES OF ICAR

1) The ICAR will, within limits of resources, pay local costs of cooperative projects in India including operations and salaries and travel of Indian nationals assigned to mutually agreed projects.

2) The ICAR will provide necessary work space, local secretarial assistance and official communication facilities for the effective working of such foreign scientists as may be accepted for assignment to mutually agreed projects in India.

3) The ICAR will provide land, laboratories and field facilities for the conduct of cooperative projects in India.

4) The ICAR, acting in concert with the Government of India, will establish procedures whereby CIMMYT is not required to pay the import and customs duty on such equipment and supplies as CIMMYT may make available for cooperative projects in India.

C. FACILITATION

In order to facilitate the cooperative undertakings envisaged under this agreement, ICAR will

a) Arrange for payment of duties, and for obtaining customs clearance on equipment, instruments and supplies imported by CIMMYT in support of the agreement.

b) Arrange necessary quarantine formalities so as to expedite exchange of seed materials.

c) Authorize the Coordinator to engage directly in the exchange of breeding material, germ plasm and varieties for inclusion in international trials and for breeding purposes and germ plasm collections at CIMMYT, subject to appropriate quarantine inspection as referred to in (b) above. Likewise, the Coordinator is to receive such materials which will be of benefit to maize and wheat research in India.

d) Extend invitations to CIMMYT scientists and wheat and maize scientists from other countries to participate in workshops, seminars and field visits, on request from the Coordinator and as approved by ICAR.

e) in case any expatriate staff members should be assigned to India under this memorandum by mutual agreement, ICAR agrees that arrangements will be made so that such persons will not be subject to payment of Indian income taxes and shall not have to pay import duties on their household and personal effects, or on consumable supplies imported for their personal and family use.

f) Benefits, such as improved breeding material, machinery designs, etc., accruing from this cooperative effort may be used by both parties with due recognition of each party's contribution. Research findings will be published in the public interest. Manuscripts for joint publication will be submitted for approval by both parties to the agreement.

This memorandum is intended to set forth the basis of cooperation between the two parties and to indicate their

general intentions. Nothing in this memorandum shall be binding on either party to provide contributions to the cooperative effort beyond the level of resources which may be made available to such party.

In view of changing situations in the dynamic maize and wheat improvement program in which CIMMYT and ICAR (AICMIP and AICWIP) is engaged and to provide for joint cooperation as new opportunities arise this memorandum may, by mutual agreement, be amended as circumstances warrant.

This memorandum will be implemented through periodic work plans which will be developed jointly by CIMMYT and ICAR (AICMIP and AICWIP) and which will set forth more specifically program activities to be carried out under this cooperative agreement and the anticipated contribution of each party. It is also recognized that all cooperative activities cannot be fully anticipated in advance and furthermore that certain joint activities may have a duration of several years. Hence, flexibility in developing work plans is essential. Agreement to the foregoing is signified:

For the ICAR of the Government of India

Signed: _____

Date: _____

For the International Maize and Wheat Improvement Center:

Signed: _____

Date: _____