Oil crops: Proceedings of the three meetings held at Pantnagar and Hyderabad, India, 4 – 17 January 1989
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Esta serie incluye ponencias de reuniones, informes internos y documentos técnicos que pueden posteriormente conformar la base de una publicación formal. El informe recibe distribución limitada entre una audiencia altamente especializada.
OIL CROPS:
PROCEEDINGS OF THE THREE MEETINGS HELD AT
PANTNAGAR AND HYDERABAD, INDIA, 4-17 JANUARY 1989

1. The Brassica Subnetwork-II
2. The Other Oil Crops Subnetwork-I
3. The Oil Crops Network Steering Committee-I

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The developing countries are passing through a critical phase of edible oil shortage. It has been realized that through better coordination and cooperation among the developing countries and strengthening their research programs, the major problems which limit the productivity of oilseeds can be overcome.

Under the umbrella of the Oil Crops Network, IDRC has helped the establishment of four oil crops sub-networks (Brassica, sesame, sunflower and other oil crops) to bring a number of scientists from East African and South Asian countries at the respective platforms and provide forum to address their common issues. In the different circumstances of both Africa and Asia, it was first necessary to identify, define and rank the importance of the constraints so that member countries may collaborate with each other in exchange of material, information and scientists and provide opportunity for training.

First Brassica Sub-Network Meeting

In the past decade oilseed Brassica has undergone the most rapid expansion in area and production. Until recently much of the research on the crop has been concentrated on selected problems of interest to single scientific disciplines. It was the research on breeding and crop protection of oilseed Brassica that first led to the conviction that there should be close collaboration among the African and Asian scientists.

In May 1987, scientists from Brassica improvement programs in Ethiopia, India, Canada, Pakistan, Egypt, Kenya, Sweden and P.R. China met in Uppsala, Sweden to discuss the research needs of oilseed Brassica and to formulate a Brassica sub-network under the umbrella of the Oil Crops Network of IDRC. During the discussion germplasm exchange, information exchange and training were identified to be potential fruitful areas for collaboration.

Achievements After 1st Meeting

Seed registry

The regional activity was started with the preparation of the seed registry. Breeders from some of the member countries made available the update list of varieties that have been released so far for future references. This compiled list will be distributed to member countries.

Germplasm Exchange

Sixty-three oilseed Brassica varieties were collected from P.R. China, Ethiopia, India, Nepal and Sweden through the Oil Crops Network Project and distributed back to those who contributed to the nursery.

Training

National programs were able to contact each other to organize specialized training where the expertise are available. One Ethiopian Field Assistant got his training at G.B. Pant University, Pantnagar on oilseed Brassica improvement. A technician from Nepal is now being trained at the same university.

Information Exchange

The member countries were sharing information through Oil Crops
A monograph that reviews and brings together the known information on aphid screening and breeding methods has been prepared by Drs. Basudeo Singh and D.R.C. Bakhetia and distributed to member countries. It has been compiled for Brassica researchers for their consultation and guidance.

The Brassica researchers from Ethiopia and Egypt were able to share the information on Orobache situation in Nepal. The study was thorough and the write up was excellent.

Second Brassica Sub-Network Meeting

The second Brassica sub-network meeting was held at Pantnagar, India, 4-6 January 1989. This workshop was organized jointly by IDRC and G.B. Pant University of Agriculture and Technology. There were over 30 participants from 8 countries at the workshop. The basic theme the meeting addressed was technology transfer.

The presentations started after the welcome address by Dr. S.C. Modgal, Director of research, Pantnagar; opening address by Dr. Mahatim Singh, Vice-chancellor and response by Dr. Nicolas Mateo, IDRC Regional Program Officer, New Delhi. Details of the opening session and the presentations will appear in the proceedings. My paper was on "Role of High-yielding Varieties and Production Technique on Oilseed Brassica Performance in the Central, South-eastern and North-western Zones of Ethiopia". As a chairman of the Brassica sub-network committee, I also presented a status report covering 18 months period.

Recommendations of the Second Meeting, 1989

The major recommendations of the Brassica Sub-network for the coming 18 months follows:

a) Coordination

To make sure that the agreed collaboration work is carried out, the idea of five core committee members was accepted. Since Ethiopia and India are already represented as chairman and co-chairman, respectively, the nomination was opened to the other member countries and one participant from each of P.R. China, Nepal, and Egypt were chosen. Only the chairman and co-chairman will serve as steering committee members of the oilseed network. It was also agreed that wherever a member country is not represented in the committee, the respective government authorities will be approached to nominate one scientist actively involved in the development and research of oilseed Brassica as a contact person.

b) Exchange of material

Specific nurseries are not recommended at this stage. Such nurseries would be constituted once the program goes. The present material exchange system will be a kind of collective nursery where-by each member will send 500 gm seed of released varieties and/or single plant selections to the network advisor. Those who contribute get the nursery. Government regulations and quarantine requirements ought to be fulfilled.

For member countries who have mutual interest on specific
provides such as screening for resistance to Orbanche, blackleg, etc. a cross-boarder nursery exchange for advised depending on quarantine requirements. Bilateral issues among centers on CMS line exchange for hybrid production was left for the respective member countries (P.R.China, India and Canada).

As a follow up of the review work on screening and breeding techniques for aphid resistance, a screening program will be started in India with known material which have mild resistance. Sub-network members can be provided on request with best performing materials depending on the screening result.

c) Mutually Agreed Workplan for Common Problems

It was agreed that a review of the relevant literature be undertaken on Alternaria and drought. The reviewers will be Drs. Arvind Kumar and Basudeo Singh for drought and Dr. S.J. Kolte and a breeder (?!) for Alternaria. Member countries are to supply relevant informations about the above topics to the reviewers in two months time so that the first draft can be completed in six months time.

Ethiopia is invited to prepare a review on "Orobanche situation in Ethiopia". A similar work was handled in Nepal last year.

Since there are too few well-trained and experienced scientists and technologies in various fields, the idea of bilateral cooperation (scientists support) was encouraged depending on the expertise and experience in a particular field.

d) Training

Pantnagar offered to provide a one-month training on Oilseed Brassica breeding and agronomy. This training which is to be organized for B.Sc. level and above will be held in December 1989. There will be 22 participants from 10 countries.

Member countries were encouraged to take advantage of the quality training which may be undertaken in China in April 1990.

e) Practical Field Bulletins

The idea of preparing a guide to identify diseases and pests of oilseed Brassica was welcomed. Two known Indian scientists (Drs. S.J. Kolte and G.C. Sachan) will prepare the field bulletins.

f) Meeting

P.R. China will be hosting the 3rd Brassica Sub-network meeting in April 1990.

Field Visit

On January 6, the workshop participants visited the oilseed Brassica research sites and farmers' fields. The first stop was at the disease nurseries where screening of Brassica against different diseases (Alternaria blight, downy mildew and white rust), and chemical control of the diseases are being carried out. There was a lengthy discussion on the relation between leaf pigmentation and Alternaria incidence. It was felt that the plants with purplish colored leaves are probably resistant to the disease since disease symptoms are not appearing. Such characters can be exploited for breeding purpose. The entomology work was concentrating on the mustard sawfly and aphids. The investigations were on assessment of yield losses, population dynamics, chemical control and screening of germplasm. A field naturally infested with sawfly was shown to the delegates. The participants were then led through the agronomy and breeding
On the way back to the university, the delegates paid a quick visit to Pantnagar Seed Processing Plant. The owners of this plant are the Indian Government, farmers and cooperatives. The company is responsible for certified seed production and marketing. For that, the foundation seeds are distributed to farmers who multiply and sell back to the company as certified seed. The collected seed passes through several processes for the purpose of adjusting the moisture, grading and treating before the marketing of the certified seeds. It was interesting to me to note that the group putting the certificate on each bag are from a different organization and the checking is done at four levels (field, before processing, at time of processing and before bagging). The seed company provides seed for Uttar Pradesh State and Bangladesh.

Late afternoon, we went out to look at three farmers' fields and one field managed by the army. Best performance of Toria (*B. campestris*) has been realized because of the improved technology. The three farmers also followed the package which the researchers has recommended and are expecting yields between 15-20 q/ha.

trials. The agronomy program is geared more towards maximizing production and working out the economic advantage of intercropping with various combination. The other management practice studies included fertilizer trials, supplementary irrigation study and the study on the efficiency of bullock-drawn seed drill. Dr. Basudeo Singh has carried out extensive hybridization programs on toria, yellow sarson, Indian mustard, etc.