

Institutional News

1. SAARC Meeting of Counterpart Scientists on Post Harvest Technology

The meeting was organised by the ICAR at IARI New Delhi during September 27-29-1989. It was inaugurated by Dr. O.P. Gautam, Ex-Director General, ICAR. Delegates from India, Pakistan, Srilanka, Nepal, Bhutan and Bangladesh attended the meeting. India was represented by Dr. A. Alam, Asstt. Director General (Engg.) ICAR and Dr. S.M. Ilyas Head, Division of Agrl. Engg. IARI, New Delhi. Besides Drs Alam and Ilyas, the other invitees from leading institutions of the country engaged in the research on post harvest technology also participated.

2. IARI, New Delhi Organises International Training Course

IV International Training Course on Improved farm Implements and Tools was organised by the Division of Agrl. Engg, IARI, New Delhi during October 17 December 8, 1989. The course was sponsored by ITEC programme of Ministry External Affairs, Govt. of India Afro-Asian Rural Reconstructives Organisation (AARRO). The trainees from Egypt, Ethiopia, Philippines, Liberia, Oman and PDR Yemen participated in the course. Dr. S.M. Ilyas, Head of Division was the Course Director.

Farm Machinery Training & Testing Institute, Hissar

A Seminar on Minimum Tillage Technology was organised by this Institute in collaboration with Hissar chapter of of ISAE on Oct. 23, 1989. The main aim of the seminar was, to discuss as to how to reduce energy inputs in tillage operations by adopting modern technology and energy efficient implements, of course, without affecting the yield. Importance of testing and evaluation of agricultural machines was also highlighted from the point of view of standardisation of machines in order to minimise energy consumption for crop production, specially the oil seed production.

1. For improving soil water availability in dryland, tillage should be done after each effective rainfall only those tillage implements be used which expose the soil to minimum. Its effect is more pronounced in normal and below normal rainfall years. This hastens the development of a dry layer at the soil surface which acts as a barrier to soil water evaporation.
2. Shallow tillage depth upto 6 cm should be preferred in very high textured soils and it should be increased as the texture of soil is heavier.

3. Two types of attachments i.e. coulter attachment and rotary blade till for direct drilling machine have been developed at P.A.U. Ludhiana. Detailed trials of these, attachments was be carried out under different agro-climatic conditions.
4. Tractor drawn shrub/stubble shaver in an effective implement for time and energy saving in seed-bed preparation of the combine harvested paddy fields. This not only helps in reducing number of tillage operation but also in early sowing of wheat after paddy also. Its use in combine harvested paddy fields in recommended.
5. There is potential for adopting minimum tillage practices for wheat after cotton. However, the limiting factors are proper germination and weed management for which similarly developed seeding devices and proper weed management is required.

ICAR establishes an Institute at Ludhiana :

High production and productivity do not mean more income to the farmers unless matched with appropriate post-harvest technologies (APHT) needed to conserve agricultural produces and by-products and to produce value-added products. APHT will lead to growth of rural agro-processing industries assuring greater profitability to the farmers, rural entrepreneurship development, enhanced rural technological and management skill, lesser capital out-flow, thus improving rural economy and standard of living. Hence, the Central Institute of Post-Harvest Engineering and Technology (CIPHET) was launched by the Indian Council of Agricultural Research (ICAR) on 4th October, 1989.

The CIPHET, 1989, adjacent to Punjab Agricultural University (PAU), Ludhiana, will be Nodal Institute in ICAR in the area of Post-Harvest Engineering and Technology (PHET). Structured on unit operation basis, the Institute would be able to handle wide ranging PHET problems. CIPHET will take up lead researches of wider applications, as well as problem solving researches of regional and national importance, coordinate efforts in national and international cooperative researches and be repository of information and its dissemination in PHET. The engineering and technological divisions of ICAR commodity based Institutes will undertake applied and adaptive researches relating to that commodity.

The CIPHET has been started with a nucleus staff in the 7th plan period by deployment of resources of ongoing PHET programmes. In the 8th plan period, it would have a total staff strength of about 230. Now, the Institute has started functioning with the joining of Dr Nawab Ali as Officer on Special Duty (OSD). The Institute office is, at present, located in the PG Wing, College of Agricultural Engineering, PAU, Ludhiana.

Objectives

The major thrust of the Institute is development of appropriate crop and location specific post-harvest technologies at rural threshold to assure due dividends to farmers and landless dependents on agriculture and allied activities. The specific objectives are:

- 3.1 Monitoring harvest and post-harvest engineering and technological problems of the rural sector and evolving suitable strategies to find technically superior and economically viable solutions.
- 3.2 Development of location specific post-harvest technologies that minimise quantitative and qualitative losses of agricultural produce and by-products on farms, rural homes, rural godowns, transit, transport and marketing.
- 3.3 Development of post-harvest engineering and technologies that add value to the produce and by-products.
- 3.4 Development of management techniques that enable the growers negotiate with exploiting forces of market and trade.
- 3.5 Development of rural agro-processing industrial models suitable at individual or collective/small community level for different production catchments.
- 3.6 Collection and collation of new developments in relevant disciplines in India and abroad, and harnessing them to the advantage of rural sector.
- 3.7 Field testing, evaluation, pilot plant studies, techno-economic feasibility studies and industrial liaison on laboratory proven technologies.
- 3.8 Documentation, information dissemination and training and consultancy to entrepreneurs.
- 3.9 Serving as nodal institution for national and international cooperation in the area of post-harvest engineering and technology at rural threshold.

Divisions

In order to achieve the objectives, the Institute would operate through the following seven Divisions:

- 4.1 Product Separation and Quality Improvement,
- 4.2 Drying and Storage,
- 4.3 Milling, Packaging and Transport,
- 4.4 Agricultural Structures and Environmental Control,
- 4.5 Food Science,
- 4.6 Pilot Studies and Agro Industrial Development, and
- 4.7 Training and Technology Transfer.

Besides, there would be an Administrative Division and supporting utility services like Library, Workshop, Computer Centre, Dispensary, etc. The coordinating

units of the following All India Coordinated Research Projects (AICRP) are also located at CIPHET, Ludhiana.

- (i) Post-Harvest Technology (PHTS),
- (ii) Application of Plastics in Agriculture-Plant Environment Control and Agricultural Processing (APA), and
- (iii) IDRC-ICAR Oilseed Processing Network (OPN).

Regional Station

Indo-US Subproject on Soybean Processing and Utilization (SPU) at the Central Institute of Agricultural Engineering (CIAF), Nabi Bagh, Bhopal—462 018.

Activities

The Institute would mainly devote to research and development activities but will have associated training and transfer of technology programmes for farmers and rural entrepreneurs. For this purpose, it would have linkages with national and international scientific and technical institutions.

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Panel to Administer Farm Machinery Fund Planned

The centre plans to set up an autonomous body to administer the special funds for farm machinery hand implements conceived under the Prime Minister's agriculture package announced recently. While the exact structure is yet to be decided it is expected that the body would be set up under the overall jurisdiction of the ministry of agriculture and cooperation. Final approval for setting up the body will, however, be subject to clearance by the Planning Commission as the entire agriculture package has been conceived within the perspectives of the eighth plan period.

It was felt necessary to create the new body in view of substantial allocations that would be required for setting up the fund, which aims at bringing about greater mechanisation particularly, among small and marginal farmers. The exact quantum of investments required to set up the fund is, however, subjected to further negotiations at various levels and no estimates have been worked out so far. It is expected that the subject will come up for discussion at the next working group meeting of the ministry early next month.

Interestingly, however, while there is a realisation that allocations would have to be significant, it is not exactly known as to how much money may ultimately flow into the fund in view of the fact that funds for the farm machinery sector have always been negligible under the overall allocation for agriculture. This is primarily because the chunk is taken away by other priority areas.

The major thrust of the fund would be aimed at the small machinery and implements sector, particularly power tillers, seed drills and other tools where the adaptability of farmers to such equipment has been low. It is understood that the fund will essentially address itself to bringing about greater marketability, servicing and creation of proper production engineering of implements and machinery, which have been lacking so far.

Thus, there are plans to set up better engineering designs of equipment and machinery and effect a fruitful lab-to-plant transfer of technology. At present, most of these equipment are manufactured in the small-scale sector where the resources for transfer of technology are generally lacking. Also to help market these equipment, the state agro industries development corporations would be involved so that appropriate technologies and their future servicing are made available at the farmer's doorsteps.

While the demand for power tillers has been gradually increasing, mostly in the eastern states, their availability has been limited. This is because one of the three power tiller manufacturing units in the country has not been functioning owing to operational difficulties.

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