

Institutional News

RECOMMENDATIONS OF THE GROUP MEETING ON "AGRICULTURAL HAND TOOLS RESEARCH" HELD AT CENTRAL INSTITUTE OF AGRICULTURAL ENGINEERING NABI BAGH, BHOPAL-462018, ON SEPTEMBER 21, 1987.

GENERAL

- 1) Agricultural hand tools should be included in the implement census which is carried out alongwith livestock census.
- 2) It is necessary to prepare a status document covering research work carried out so far in the country on agricultural hand tools.
- 3) Information regarding existing designs of hand tools should be compiled and documented. It will be worthwhile to collect and keep one piece of each type of hand tool-traditional as well as improved at one place. It will help the research workers and manufacturers in their work.
- 4) It was suggested that starting an All India Coordinated Research Project on Ergonomics will be very helpful in the development of improved hand tools.
- 5) There is a need to have a cooperative tie-up of the various institutions involved in research, manufacture and extension to promote the commercialization of improved hand tools.

RESEARCH

1. Agricultural hand tools may have some variations due to prevailing functional use and varying anthropometric characteristics from region to region. Therefore, necessary improvement, if feasible, may be made in the existing hand tools and new hand tools for specific/multiple functions may be developed. To increase the work out-put, manually operated equipment may also be developed which should be ergonomically better and functionally more efficient.
2. While designing the hand tools use of principles of soil dynamics and force analysis must be made. The blade design of soil working hand tools should be based on soil dynamic studies. It is also necessary to specify the sharpness of blade and hardness required in various soil working tools.
3. It is necessary to base the design of handle i.e. shape, size and cross section on anthropometric considerations. Therefore, anthropometric data of farm workers needs to be collected and data bank be maintained at one place.
4. In selection of material for handles, mechanical as well as ergonomic aspects should be considered.

5. Tool-handle joint is very important in the performance of a tool. The joint should be firm. 'D' shaped eyes for fixing handles for some equipment like spade have given good results. Therefore, trials may be carried out on these aspects to finalize the recommendations for large scale adoption.

6. Ergonomical studies on different modes of operations may be carried out. This information will be useful for designing of hand tools.

7. While reporting the test data of hand tools and manually operated equipment, alongwith tool performance i.e. work done/hour, data regarding operator-tool performance i.e. work done per day should also be reported. This data should be based on day long tests.

8. Improved hand tools may be compared with traditional ones at different centres and efforts should be made for popularization of promising ones.

9. Traumatic injuries are on increase due to the use of improper design of hand tools, therefore, it is very necessary to give due consideration to various ergonomic aspects in design and testing of hand tools and manually operated equipment.

10. There is a need to introduce metallurgical improvement in most of the hand tools being marketed in India.

11. It was suggested to develop a improved sugarcane harvesting knife combining good design features of the existing knives and using proper material.

12. There is a need to carry out ergonomic studies on manually operated sprayers and dusters.

13. At present there is hardly any work being carried out on horticultural tools. Therefore, it is necessary to evaluate the existing tools for their performance and to develop manufacturing technology for production of quality hand tools. There is also a need to design and develop tools for operation which are at present being done by hand.

STANDARDIZATION

1. It is necessary to have a standard method for testing of hand tools and manually operated equipment.

2. There is a need to develop ISI standards for various hand tools so as to maintain the quality.

3. The ISI standards available on some hand tools are more than 10 years old and need to be reviewed by a panel of experts for suggesting modifications in materials, handle design, tool design and other aspects.

MANUFACTURING AND POPULARIZATION

1. It is necessary to have centralized manufacturing of hand tools so as to maintain quality and to reduce cost.

2. State Agro-Industrial Development Corporations should take up industrial design aspects. Once the prototype is finalized by research organizations, the corporations may tailor the product for commercial manufacturing. While doing this care should be taken to see that the critical dimensions and aspects are maintained.
3. Village artisans must be involved in manufacture, sales, service and custom hiring of improved agricultural hand tools and equipment. The quality of equipment manufactured by them can be improved through upgradation of their fabrication techniques.
4. Each tool and equipment should have a operator's manual mentioning about various critical adjustments, operation, procedure and trouble shooting.
5. To encourage the manufacturers for production of quality hand tools, it is necessary to have assured demand. Central and State Governments and Agro-Industries should join hands in extension work for popularization of improved agricultural hand tools so that an assured demand is created.
6. It is necessary to start pilot projects for finding ways to reduce cost of production of hand tools.
7. Cheap and quick testing facilities should be made available to hand tool manufacturers to enable them to maintain quality of their products.
8. There is a need to study on quality of agricultural hand tools manufactured in the country and constraints in adoption of ISI certification.
9. Advertising and proper demonstrations of improved hand tools should be carried out extensively for popularizing the improved hand tools.
10. Proper training of the users is necessary to get the best performance. Programmes may be formulated for the same.

WORKSHOP-CUM SEMINAR ON FARM MACHINERY AT PAU, LUDHIANA

The Department of Farm Power & Machinery, PAU, Ludhiana organised a "Workshop-cum-Seminar on Farm Machinery" during June 1-8, 1988. The workshop was sponsored by the Directorate of Extension Education, Ministry of Agriculture, Govt. of India. In all, 10 participants who were the nominees of Deptt. of Agriculture, Punjab and J&K took part in the proceedings. Dr. S.D. Khepar, Dean, College of Agricultural Engineering inaugurated the function emphasizing the need of advanced training to enhance the capability of inservice personnel. The programme included lectures supplemented by practical field demonstrations of tools and machines recently developed farm like wheel hand hoe, fertilizer broadcaster, paddy transplanter, sugarcane planter and high clearance sprayers.

Dr. K.S. Gill, Director of Extension Education, was the Chief Guest at the concluding function. Dr. Gill lauded the role of agricultural engineers to popularize the farm machinery and tractors, trus, enabling the farmers to raise agricultural production and productivity.

Dr. V. K. Mittal, Senior Agricultural Engineer & Head of farm power and Machinery Department was Director of the Course.

INDUSTRIES INSTITUTE MADE 'NODAL AGENCY'

COIMBATORE, July 8 : The Small Industries Service Institute, Madras, has been designated a "nodal agency" for large--scale upgradation of technology of the pumpset industry in Coimbatore. This was disclosed here on Friday by Mr. J.C. Jain Director, office of the Development Commission for Small-Scale Industries, New Delhi.

Inaugurating a seminar on "Marketing of Pumps". Mr. Jain pointed out that over Rs. 350 million had been invested in the pumpset industry, which gave direct employment to about 25,000 workers. However, 52 per cent of the pumpset manufacture was in the small-scale sector. There was criticism that most of the agricultural pumpsets in the country were working below their optimum capacity. He attributed it to two factors-inconvenient size of the piping system and improper foot valve. Hence the Small Scale Industries Development Organisation (SIDO) had made this SISI, Madras a nodal agency for technological upgradation of the Coimbatore pumps.

("Indian Express" Madras)

INDIAN STANDARDS RELATING TO AGRICULTURAL AND FOOD PRODUCTS

The Bureau of Indian Standards has published the following new and revised Indian Standards relating to the field of Agricultural and Food Products:

IS: 9253-1987	Guideline for field performance and haulage tests of agricultural wheeled tractors (<i>first revision</i>)
IS: 9555-1987	Rice polisher (<i>first revision</i>)
IS: 12015-1987	Cypermethrin technical
IS: 12128-1987	Reversible handles for cross cut saws
IS: 12163-1987	Cant hook
IS: 12164-1987	Log tongs
IS: 12207-1987	Recommendations on selected performance characteristics of agricultural tractors

Copies of the Indian Standards are available from the Sales Services at BIS Headquarters at New Delhi and Regional and Branch Offices located at Bombay, Calcutta, Chandigarh, Madras, Ahmadabad, Bangalore, Bhopal, Bhubaneshwar, Guwahati, Hyderabad, Jaipur, Kanpur, Patna and Trivandrum.

CONCESSION IN POWER TARIFF FOR PUMPS

BOMBAY, July 7 : The Maharashtra government, in a major relief to the farming community, today announced a concessional uniform electricity tariff for agriculture pump sets.

The energy minister informed both houses of the state legislature that now it would be a rate of Rs. 100 per horse power per year or 16 paise per unit of electricity consumption for agricultural pump sets of all farmers and peasants.

(Times of India, New Delhi)

FARM PUMPSETS PILOT PROJECT LAUNCHED

HYDERABAD, July 5 : Under rural development programme, agricultural pumpsets, sponsored by Churion Canadian Inc., with 75 per cent subsidy, were distributed to the beneficiaries on Tuesday here. The former bears 25 per cent of the cost. Vijay Solar Enterprises, Hyderabad, opened the scheme.

Inaugurating the launching of this pilot project, at the Solar Enterprises, here on Tuesday, Irrigation Minister K.E. Krishna Murthy, said even the State Government was offering only 50 per cent subsidy to the SCs and BCs. He, therefore, complimented the partners Mr. Y. Ravi Krishna and Mr. M.S. Ravi Prasad of the enterprise for having taken up the scheme in right spirit.

The Minister also said that Solar powered sets would be of real service to the farmers at a time when the State was reeling under power crisis.

Mr. Y. Ravi Krishna, in his report, explained the salient features of their need-based company. Mr. Ravi Prasad, earlier, welcomed the Minister and assured him that they would soon market the solar units to uplift the poor farmers. A beneficiary said that the pumpset, with five horse power, will help irrigate five acres of land. Mr. Rao of Sun Power Products, Madras, proposed a vote of thanks.

(Deccan Chronicle, Secunderabad)

KARSHAKA PARISHAD PLANS FARM MACHANISATION

HYDERABAD, July 14 Andhra Pradesh Karshaka Parishad is contemplating to introduce massive machanisation in agriculture to maximise the production and to provide

employment to the rural educated unemployed youth, Mr. N. Chandrababu Naidu, Chairman of the Parishad, said here on Thursday. Addressing a press conference, he said that Andhra Pradesh State Agro Industries Development Corporation would manufacture and acquire multipurpose use farm implements from other manufacturers and supply to the rural educated unemployed youth.

Mr Naidu said that the representatives of Government and private industries manufacturing farm equipment and Andhra Pradesh Agriculture University met here today and reviewed the situation about the use of agricultural machinery.

PLAN TO MAKE FARM IMPLEMENTS IN PRIVATE SECTOR

NEW DELHI , July 9 : The Government is considering the commercial production of prototypes of agricultural implements developed by the ICAR units by the private sector, Mr. Hari Krishna Shastri, Minister of State for Agricultural Research and Education, said here yesterday.

(Hindustan Times, Patna)