

The land-use-pattern in these tank settlements is unique and is well demonstrated at Walagambahuwa site. The three fold land use pattern comprising of "Chena", (purely rainfed highland), "Weliyaya" (traditional paddy tract), and "Gangoda" (homestead) are very clearly seen. Walagam bahuwa village settlement has 48 families. The average tract is 30 acres (14 ha.). The entire paddy tract comes under project operations. In addition to farmers' involvement in the paddy tract immediately below the tank ("pura-na Wela") they do cultivate chenas. Akkarawela and Olagam cultivation is done only during favourable Maha seasons when sufficient runoff water is available in the catchment area and in the near by tanks fed by the excess runoff and seepage from the Walagambahuwa tank.

The traditional practices:

In July every year, farmers start cutting and clearing the jungle for chena cultivation. In the latter part of July cutting operation is complete and the cut jungle is allowed to dry during the dry month of August. At the end of August or in early September, they burn the jungle and by third week of September the chena is ready for seeding the Maha crop. Pulses are sown and chillies are transplanted in the chenas. In late November or early December if sufficient water is collected in the tank, the farmers start preparing paddy land for cultivation. If the water collected is not upto their satisfaction, the land is allowed to fallow. Not more than once in six or seven years they cultivate the paddy tract as the Maha rainfall is erratic. In such years, the farmers depend on chenas for their survival.

The new concept:

This project was started in Maha 1976/77. The research program was designed to develop and test technology most appropriate to the farmers' existing resources. We planned to plant rice during the Maha season (September to February) and follow it by another paddy crop or high land crops such as cowpea, black gram, green gram, sorghum, or vegetables in the paddy fields during the Yala season. (March-May). While the major emphasis was on conducting agronomic trials and monitoring farmers activities.

The new technology:

We observed a close relationship between production and rainfall pattern. The paddy cultivation was started after the first rains. (In the third week of September). A dry spell of 12 days occurred in mid-October slightly affecting the growth of paddy seedlings. Thereafter the rainfall was uniform and the rice crop was possible without irrigation from the tank. The yield of chena crops varied with the pattern of rainfall distribution.

No water from the tank was used for paddy crop during the Maha season. Only two irrigations were used for other field crops during the Yala season. As such 1-1.5 meters of water remained in the tank at the end of the second crop.

After one year's experience at Walagambahuwa, the second crop year 1977/78 was projected towards understanding, the field problems associated with early land preparation, performance of paddy varieties, and water and labour use. The project helped the farmers to get the credit facilities from the local bank to help them procure necessary inputs.

Summary:

Before the Project was started the possibility of getting a rice crop by following the traditional system of agriculture (that prevailed under the tank-based systems) was once in five or six years. But with the new technology developed, Walagambahuwa has increased that possibility to one crop every year. In favourable years double cropping of rice is quite a possibility. The new technology has increased the rice production by 150-200%. Short aged 3-3½ month varieties like BG 34-8 or 62-355 when planted early at the onset of Maha rains helps to avoid crop failures. This encourages farmers to invest more on the paddy crop. The identification of different land elements has highlighted the importance of developing more appropriate technology for different land elements in the same paddy tract.

AGRICULTURAL EDUCATION & TRAINING

A National Workshop on agricultural education and training was held at Peradeniya from 5th to 7th November 1979. The participants agreed to the following:

- (1) All districts should have vocational training centres to train farmers. (At present there are only 14 centres).
- (2) Instead of the One Year Certificate Course (conducted at Practical Farm Schools) organise and conduct short courses from 1 day to 1 week duration on a regular basis at Farm Schools.
- (3) Formulate 3 - 6 month duration Vocational Training Courses in different disciplines such as Crop Husbandry, Horticulture, Poultry Keeping etc. This training is for farmers and young farmers. School leavers should be given priority place for this training. Trainees attending these courses should be paid a daily allowance of Rs. 5/= per day to cover cost of meals.
- (4) Home Science Training Programmes should be conducted at these centres for farm women and girls.
- (5) Each District Training Centre should have at least 25 acres, to provide a base for practical training.
- (6) All cinema vans should be redesignated as mobile information and training units. Each District Training Centre should have one such unit.
 - Farms of progressive farmers should be used for training young farmers.
 - Utilise voluntary organisations for training purposes.
- (7) Trainers should enjoy equal salaries and other privileges available to scientists of other divisions.
- (8) Cultivators and livestock-keepers should be given priority for training. Subject matter for training should include critical areas that hinder agricultural production and productivity.

- (9) The School of Agriculture, Kundasale (S.A.K.) Diploma holders should be our grass-root level workers.
- Staffing position at Kundasale should improve.
 - The entrance requirement for two year diploma course should be G. C. E. 'A' level.
 - S.A.K. should offer in addition to the two year diploma course a one year specialised course for diploma holders in such areas as crop husbandry - water management - plantation crops etc.
 - Enrich training programmes by undertaking a limited range of adaptive research and extension work.
- (10) All trainers at District Training Centres should be continuously updated in technology and pedagogy.
- (11) In-Service Institutes should organise advance level staff courses for senior officers of the department.
- (12) The Ministry of Agricultural Development and Research may develop a functional relationship with the Ministry of Education in schools. This should help closer coordination of available resources at various levels to support agricultural development.
- (13) Trainers should have better promotional prospects.
- (14) Officers trained abroad, on return serve for a minimum period of four years at an In-service Training Institute (I.S.T.I.)
- (15) A unit for training in pedagogy should be set up at I.S.T.I. Gannoruwa, to train all other trainers.
- (16) A translation unit should be set up for translation and production of training materials.
- (17) Each R.T.C. should produce training materials for its trainers and extension personnel in the region.
- (18) Increase budgetary allocations given to training centres.

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