TUR DHAL - A PROMISING PULSE CROP

D.T. de S.L. BOGAHAWATTA
Assistant Director of Agriculture
Technology Transfer Division
Department of Agriculture

- Tur dhal is similar to Masoor dhal in flavour and nutritive value.
- It is ideally suited for cultivation in the rainfed marginal lands of intermediate and dry zones.
- A very good ratoon harvest can be obtained after the first harvest.

SUITABLE LANDS FOR CULTIVATION

Well drained uplands of intermediate and dry zones.

TIME OF PLANTING

The most suitable time to plant Tur dhal is from 3rd week of October to 2nd week of November.

RECOMMENDED VARIETIES

ICPL - 87 - determinate variety
ICPL - 02 - indeterminate variety
ICPL-84045 - indeterminate variety

SEED RATE

20 - 25 kg per hectare
(8 - 10 kg. per acre)
(Present price of a kg of seed is Rs. 35/-)

SPACING

Between rows - 45 cm (1 1/2 ft)
Within rows - 10 - 15 cm (4" - 6")

Leave more space between every six rows to facilitate pest management operations.

FERTILIZER APPLICATION

The following dose of fertilizer is recommended, although the crop can generally produce good yield without fertilizer.

Basal :

Tripple Super Phosphate -140 kg/ha
Muriate of Potash - 75 kg/ha

Top dressing :

45 Days after planting
Urea - 30 kg/ha

WEED CONTROL

Weed the crop once or twice to keep it weed free up to 45 days after planting. Remove weeds first at 2 - 3 weeks after planting when the crop is at seedling stage.

PEST MANAGEMENT

The crop is susceptible to several insect pests. The most harmful of them are the flower bud and flower eating caterpillars, pod boring caterpillars and the pod fly.

For the control of insect pests the following procedure is advocated. After the appearance of flower buds but before flowering apply Chlorfluazuron 5% EC at the rate of 0.5 - 0.6 l/ha (1.1 ml/l).

10 days after the first application of insecticide, apply one of the following insecticides twice at 10 days interval.

- Ethofenprox 10% EC at the rate of 750 ml/ha (1.6 ml/l).
- Thiodicarb 375 F at the rate of 1000 - 1250 ml/ha (2.2 ml/l)
- Chlorpyriphos 20 EC at the rate of 3000 ml/ha (6.6 ml/l).

HARVESTING

The crop is ready for harvest at about 110 -120 days after planting. Pick only well matured pods. Harvesting can be completed with 3 picks, at 10 day intervals. Manual picking requires lot of labour. Thus, at the third pick, remove the entire upper portion of the canopy with a hand sickle.

THRESHING

Seeds can be separated by threshing with a tractor or by beating the pods stuffed in a gunny bag with a club.

YIELD

About 1000 - 1200 kg. of seed can be obtained from 1 ha.

PRUNING FOR THE RATOON CROP

Prune all the plants at a height of 30 cm (1 ft) above ground level, just after the onset of *yala* rains (End of March or Early April).

It is very important to cut all the branches and leave only the main stem.

After pruning new flushes will grow and soon start to produce flower buds. At this stage, before they open, apply pesticides again as indicated earlier.

RATOON YIELD

This is similar to that of the main crop.

SPLITTING OF SEEDS

The Department of Agriculture has already introduced several light machines for Tur dhal processing on a small scale. A small machine is capable of processing about 500 kg per day. By using the domestic chilli grinding stone, a small quantity can be processed at home. Soak the seeds for 4 - 6 hours in cold water and then sun dry for 1 1/2 - 2 days before splitting.

COOKING

Tur dhal cooks best when soaked for about 2 hours in cold water before cooking. This helps to cook the dish quickly and more deliciously. Cooking can be made quicker by the addition of few drops of edible vegetable oil.

SWEET POTATO BREAD

Because of commercial interest in using sweet potato as an ingredient in baked goods, a research focused on a chemical nutritional evaluation of sweet potato clones for use in bread making in Peru.

A total of 444 sweet potato clones were analysed for reducing sugars and 25 clones were selected. These clones had less than 1% of reducing sugar content (dry weight basis), more than 7% total protein (dry weight basis) and a dry matter content of greater than 35%. Of these 25 clones, only two were sweet tasting after cooking.

Sweet potato bread was made by replacing 30% of the wheat flour (on fresh weight basis) with ground, raw sweet potato yams of these clones. The resulting bread was found, by a taste panel, to have good appearance, colour, flavour and texture. The level of sweetness of the clone had no effect on the acceptability of the sweet potato bread. Nutritive values of the sweet potato bread were determined in trials, and compared with wheat bread. From nutritional point of view, sweet potato bread was shown to be comparable to bread made from 100% wheat flour.

Source: Annual Report, CIP, 1991.