

Eco-friendly methods to boost onion yield



When grown with organic inputs, the crop developed deep roots and could withstand drought conditions.

COUNTRY ONION with large-sized bulbs can be harvested when raised with organic farming technologies. The onions will taste better and can stand long storage as well according to farmer-scientist, Mr.V.Antonyasamy of Chintamani, Puliangudi in Tirunelveli district of Tamil Nadu.

He has successfully demonstrated an organic package for getting higher yields from country onions. He planted the onions in June-July season. About 1500 kg of bulbs were used to cover a hectare. The bulbs were planted in ridges and furrows thrown 40 cm apart, and the spacing between plants in a row was 15 cm.

The main field was thoroughly worked to remove all stubbles and stones and it was brought to a fine tilth by repeated ploughings. Liberal quantities of farmyard manure were incorporated with the final ploughing. The field was irrigated immediately after planting, and the young sprouts showed up within a week. When the plants were about 15 days of age, the first manual weeding was done, and the earth was stirred up using a hand hoe. This facilitated better aeration for the root zone. Soon afterwards, the first spraying was done with fish ensilage, according to Mr. Antonyasamy.

The fish ensilage was prepared by soaking 1 kg of marine fish in a 1 kg jaggery solution dissolved in 1 litre of water in an earthen pot. In about a month the fish decomposed in the fermented broth of jaggery as indicated by sweet smell. The ensiling process takes only fifteen days in the case of inland fish. About 100 ml of the resultant liquid was diluted in 10 litres of water, and the suspension was sprayed on the crop, according to him. On the 30th day of planting, a second round of weeding was done, and at that time 3 per cent solution of *Panchakavya* was sprayed to make it grow luxuriantly. On the same day, about 10 tonnes of compost mixed with rice husk ash was broadcast over the entire field.

The field was copiously irrigated to soak in the nutrients. Subsequent irrigations followed at weekly intervals as dictated by the soil moisture regimen. As a plant protection measure a botanical insect repellent was sprayed on the crop when it was 15 days old. The plant-based concoction called 'Poochi viratti', was made by soaking equal quantities of leaves of *Vitex negundo* (*Nochi*), *Calotropis gigantea* (*Erukkan*), *Nerium* (*Arali*), *Aloe vera* (*Sothu Kathazhai*) and *Pongamia pinnata* (*Pungam*) in cow's urine for seven days in shade. The fermented liquid is diluted ten times in water and sprayed over

the crop to repel sucking and chewing pests, according to him. To protect the crop from any fungal infection, Mr. Antonyamy sprayed it with a mixture of *Aloe vera* and country garlic pearls ground and soaked in water for 24 hours. This preparation was diluted in 200 litres of water and sprayed over the crop at monthly intervals starting from the 15th day of planting. Two more manual weedings on the 45th day and the 60th day were done.

The crop grew well, and was ready for harvest on the 70th day. The leaves turned yellow. The crop grown with organic inputs had developed deep, penetrating roots and could withstand drought conditions. The crop was harvested manually, and a yield of 17.5 tonnes of bulbs was recorded from one hectare. The cost worked out to Rs.50, 000 per hectare, and he sold the crop at a rate of Rs.5 a kg, according to Mr. Antonyamy.

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