

## Vegetable soybean variety Swarna Vasundhara: an opportunity for agri-business

Vegetable soybean is an important leguminous vegetable whose green pods are harvested when the seeds fill 80-90 % of the pod width. Vegetable soybeans differ from the grain soybeans in respect of their large sized seeds, higher levels of sugars, more than seventy-five per cent 2-and 3-seeded pods, grey pubescence and bright green pod and seed coat colour.



Swarna Vasundhara, an improved variety of vegetable soybean has been developed at ICAR Research Complex for Eastern Region, Farming System Research Centre for Hill and Plateau Region, Plandu, Ranchi, Jharkhand and released by CVRC for commercial cultivation

in India. The green pods become ready for first harvest in 70-75 days after sowing with 50-55% recovery of shelled bright green beans. There are three pickings in crop duration of 80-85 days. It is an excellent source of digestible proteins, carbohydrate, lipids, essential fatty acids, phosphorous, iron, calcium, zinc, thiamine, riboflavin, vitamin E, dietary fiber and sugar. The shelled green beans are used as tasty cooked vegetable and the mature dry seeds are used for making value added products. Owing to the high nutritional value, this variety was introduced in Jharkhand and other states of India to provide nutritional and livelihood security among farmers.

A Pune based agripreneur Mr. Chandrakant Deshmukh took 50 kg of Swarna Vasundhara seed



from ICAR Plandu in 2019 which he multiplied for area expansion. In 2020, he cultivated Swarna Vasundhara in 10 acres in black cotton soil of Warpud village at Parbhani Taluka in Maharashtra at spacing of 60 cm x 15 cm under sprinkler irrigation system. He

harvested 15q graded (2-&3-seeded) green pods per acre. Economics of cultivation of vegetable soybean variety Swarna Vasundhara per acre is as follows:

Cost of cultivation: ₹30,000/-

(including lease value of land, land preparation, manure and fertilizer, irrigation, intercultural operations, pesticides, harvesting, etc.)

Gross income: ₹ 3, 00, 000/-

(Yield of green pods: 15q, market rate: ₹200/- per kg)

Net income: ₹ 2, 70, 000/-

Blanching process: The cleaned green pods are kept in hot water (90 degree centigrade) for five



minutes followed by immediate dipping the blanched pods in cold water (4 degree centigrade) for five minutes to maintain original colour and



texture. Further these pods are dipped in normal water for five minutes before storage in deep freezer.

Mr. Deshmukh stored blanched green pods at -18 degree centigrade for staggered marketing. Pods can be stored up to 18 months. These blanched and frozen 2-&3-seeded green pods are being sold @₹300/kg. He is sending the frozen pods to Pune, Mumbai, Bengaluru and Hyderabad as per market demand. Shelled green seeds of one-seeded pods are being sold @₹400/kg after blanching. It is consumed with salt.

Value addition: Mr. Deshmukh harvested dry mature seeds @ 7q/acre which is being sold @₹100-150/kg. He is also making tofu (soy *paneer*) from dry mature seed. One kg seed yielding 8 litres soy milk which is yielding 2.25 kg tofu. Tofu of Swarna Vasundhara is attractive white coloured, soft (spongy) textured, without beany flavour and is in great demand in Maharashtra. Tofu prepared from other soybean varieties are not so attractive in colour and not so soft and is sold @₹180/kg whereas SwarnaVasundhara tofu is being sold @₹300/kg. Cost of making 225 kg



soy *paneer* from 1q grain of Swarna Vasundhara is ₹13000/-. The net profit from sale of 225 kg soy *paneer* is ₹54,500/-. The roasted grains are also being used to make high quality *sattu* (flour). The grains are consumed as nutritious food after soaking in water for 8 hours. Many other products like soy curd, *chhena*, gulabjamun sweets, ice-cream, etc.

are also being prepared from Swarna Vasundhara grains. Its value added products are highly remunerative and provides golden opportunity for setting up enterprises.

(Source: ICAR-RCER, FSRCHPR, Ranchi, Jharkhand)