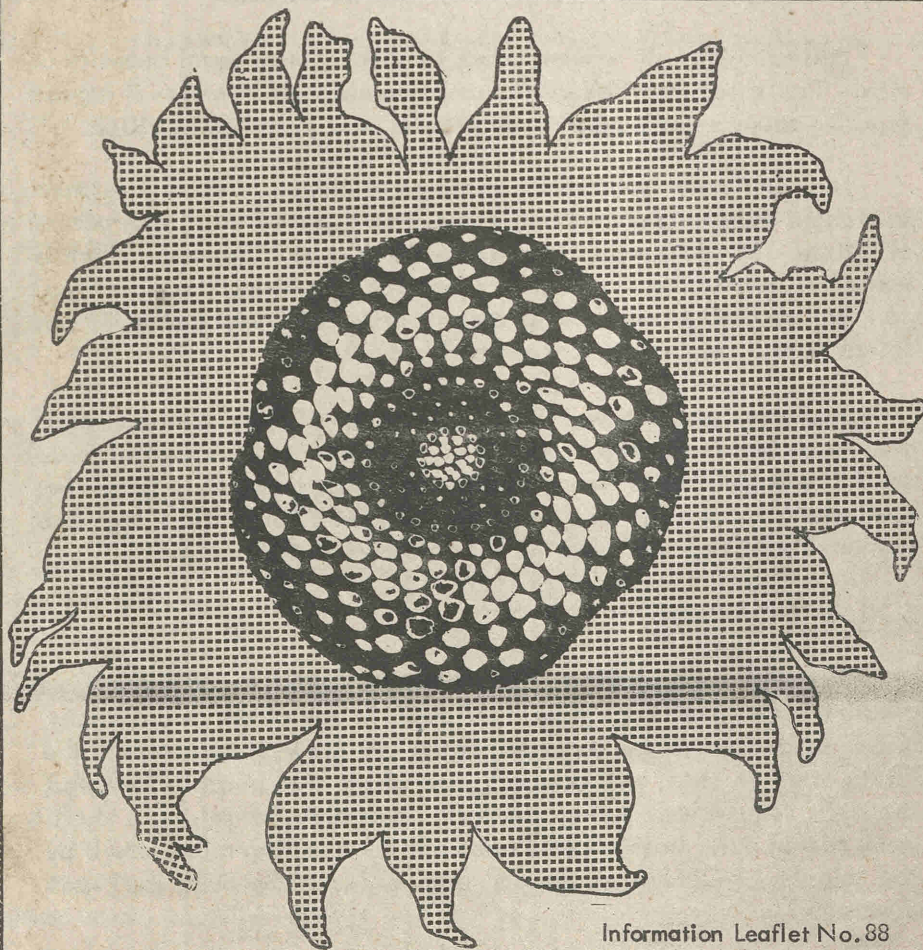


RAISE Sunflower

A PAYING OILSEED

Farm Information Unit, Directorate of Extension, Ministry of Agriculture, New Delhi



Information Leaflet No. 88

Department of
Students
B. Sc
Acc. No. 528-

RAISE SUNFLOWER — A PAYING OILSEED

Sunflower is an important oilseed crop of today. It can give large quantity of top quality oil per unit area and per unit time. Sunflower seeds contain 40 to 50 per cent oil. A crop raised under irrigation yields from 10 to 12 quintals of seed per hectare and 4;6 quintals under rainfed conditions. It can be harvested in around 100 days.

Sunflower oil is a very good cooking medium. It can be used in place of groundnut oil in the preparation of vanaspati. The keeping quality of sunflower oil is excellent. Nutritionally, it is better than many other cooking media. It can be safely used by heart patients. Sunflower oil does not raise the cholesterol level in the blood. High cholesterol is bad for the heart. Sunflower oil contains proteins, vitamins A, D and E. The oil is easily digested. Being of semi-drying and stable type, sunflower oil is used in making paint, varnish and soap.

Besides high oil content, the seed has almost equal quantity of meal. The meal contains 30 per cent protein, which makes it a good feed for animals and birds. It can also be used in human nutrition.

The sunflower stalks make fairly good silage. It is more resistant to drought than maize. It is not season-bound. Its short growing period of 90 to 100 days makes it an ideal catch crop. The land, which is normally left fallow in summer soon after harvesting the main crop, can be profitably used by putting it under sunflower. Thus, it can follow potato, sugarcane or even early wheat.

Sunflower also fits well in most multiple-cropping programmes. It can be an important crop in dry farming patterns too. It can also serve as a companion to a long duration crop like sugarcane. By raising sunflower, the grower can earn a real good income. Here are some pointers for raising sunflower for oil on a commercial scale.

SOIL AND VARIETIES

You can raise sunflower on all types of soils. Avoid ill-drained alkaline soils. You can grow sunflower in any of the main seasons, under irrigation. It is, however, better to grow it in kharif in the North as otherwise it will compete with wheat area in rabi. Moreover, the water requirement during this period runs high. For raising a kharif crop, sow in July. In the South, raise sunflower during rabi. Sow it by the middle of October or the first week of November with the North East rains.

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Though sunflower can be grown under varied conditions, it comes up best in Central India, South Maharashtra, Tamil Nadu, Andhra Pradesh, Mysore and certain areas of Rajasthan and to some extent in West Bengal.

The varieties suited for different seasons and regions are earmarked below:

<u>Season</u>	<u>Regions suitable</u>	<u>Variety suitable</u>
<u>KHARIF :</u> (June-July sowing and October-Nov. harvesting).	Central region covered by adjoining areas of Maharashtra, Madhya Pradesh, Gujarat and Rajasthan; and Bundelkhand region.	Vnlmk or Peredavik in Maharashtra and Madhya Pradesh, Armavirskij in Gujarat, Rajasthan and Bundelkhand.
As above	Southern region : Raichur in Mysore and Coimbatore and Salem in Tamil Nadu.	Armavirskij
<u>RABI :</u> (Nov.-Feb. irrigated if necessary.	Kolhapur and Jalgaon regions of Maharashtra, Ahmedabad district of Gujarat, Terai of U.P., West Bengal, Coimbatore and Salem of Tamil Nadu. Telengana of Andhra Pradesh	Armavirskij Armaverts
<u>SUMMER :</u> (March-June) irrigated	Gangetic plains of Central and Western Uttar Pradesh.	Armaverts

LAND PREPARATION

Bring the soil to a good tilth by ploughing two or three times. A good tilth is required for proper germination of the seed. Open furrows two feet apart.

Apply 10 to 20 cartloads of farmyard manure or compost at the time of land preparation. Sunflower is a heavy feeder. Apply NPK at 40-60-40 kg. per hectare in case of an irrigated crop. A higher dose of phosphate is advocated rather than nitrogen.

SEED SOWING AND IRRIGATION

You will need five kilos of seed to an acre. Where germination is a little difficult, use a little higher seed-rate and then thin out, if needed.

Treat the seed with a fungicide. This is a must. If you use untreated seeds, seedling deaths will be high. You need two to three

grams of fungicide to treat a kilo of seed. For getting good results, soak the sunflower seeds in water 24 to 36 hours before sowing. Do not sow more than 5 to 7 cm. deep. Sunflower can stand a little deeper sowing than other oil seeds, hence adjust the sowing according to soil moisture level in dry areas. Follow a spacing of 60 cm. by 45 cm. in rainfed areas and 45 cm. by 30 cm. when you are raising it under irrigation. Fill up the gap, if any, 10 days after sowing.

Give the first irrigation soon after sowing. Thereafter irrigate once in 8 to 10 days. Irrigation is essential at the time of sowing, flowering and seeding stage.

INTER CULTIVATION

Inter-cultivate with a hoe after 8 to 10 days of sowing. Repeat when the plants attain 4 to 6 leaves. In rainfed areas, running a country plough between rows during the third week of crop growing is helpful. Beside killing weeds, it helps conserve moisture, if there is rain during the period.

PLANT PROTECTION

If there is an attack of cutworms, control them by dusting the crop with five per cent malathion after 20 days of sowing. Repeat two or three times, if necessary. Grass hopper at seedling stage and green bug at flowering may appear on your crop. Dust BHC 10 per cent at 12 kg. per acre. Use a 10 per cent serindust, where leaf eating caterpillars pose a problem. Parrots and sparrows get attracted by the crop especially when the flower heads are full of seeds. Make arrangements to scare them away.

For powdery mildew, spray wettable sulphur at one kg. in 200 litres of water. To control rust, use ziram spray at one gram in one litre of water at fortnightly intervals. If leaf spot disease affect your crop, spray Fyton or blue copper at one kg in 400 litres of water.

HARVESTING

When the back of the flower turns brown, they are ready for harvest. A good head will be 25 cm. across and contain about 1,000 seeds. Thrash the seeds with a stick or under a tractor. Try to bring down the moisture to six per cent. Now bag the produce.

Printed at the Offset Press, Farm Information Unit,
Directorate of Extension, Ministry of Agriculture, New Delhi