

## Sunflower

<b>1. Major growing areas</b>	:	Coastal areas of Patukhali, Barishal, Noakhali, Satkhira, Bagherhat, Khulna, Jessore, Kushtia, Natore, Pabna, Dinajpur, Rajshahi, Gazipur and Tangail.
<b>2. Production Technology</b>	:	Sunflower is grown in all types of soils. But loamy type of soil is best for cultivation of this crop. Land where there is no stagnant water during growing period, should be selected for cultivation.
a) Preparation of land	:	. Four to five ploughings are required to prepare land. Land should be well prepares and leveled by laddering and cross laddering. Land should be divided into small plots which help in irrigation, drainage and other inter-cultural operations.
b) Time of sowing	:	Kharif -2 (Mid August-Mid September) and Rabi (Mid November-Mid December)
c) Seed rate	:	8-10 kg/ha
d) Seed Treatment	:	Seeds of sunflower are attacked by different seed and soil borne fungus. So seeds need to be treated with Provax-200 @ 3g/kg seed, Ridomil MZ-72 @ 2.5g/kg seed or with Rovral @ 3g/ kg seed.
e) Sowing method	:	Seeds should be sown in rows, where row to row distance is 50 cm and plant to plant distance is 30 cm. 2/3 seeds are sown in a hill at 3 cm depth of the soil.
f) Fertilizer Application	:	Fertilizers should be applied @ 90:35:80:30:3.6 and 1.8 kg/ha of N P K S Zn and B, respectively from urea, TSP, MP, Gypsum, Zinc sulphate and Boric acid. Half of the Urea and full amount of the other fertilizers need to be applied at the time of final land ploughing and to be mixed with soil by laddering and cross laddering. Rest half of the urea should be applied as top dress during 20-25 days first time and second time at 40-45 days after seed germination.
g) Thinning of plants	:	Thinning of excess seedling keeping one plant per hill should be done within 15-20 days after emergence. Irrigation is applied when needed.
h) Other inter-cultural operation	:	First time weeding is done at 20-25 days and second time at 40-45 days after emergence.
i) Insect Control	:	If hairy caterpillars attack severely spraying should be done by Cymbush-10 EC @ one ml in one litre of water or Dursban 20ml in 1 L water is mixed and need to be sprayed to control hairy caterpillar. To control cut worm or ant 5g Sevin85 wp powder need to be treated in 1 kg seed and then should be sown.
j) Disease control	:	Leaf blight ( <i>Alternaria helianthi</i> ) and stem rot ( <i>Sclerotium rolfsii</i> ) are the major diseases of sunflower. Rovral 50wp @ 2 g/L water would be sprayed for 3 times in 10 days interval. C

k) Harvesting and threshing	:	Depending on season it takes 90-110 days to mature. Matured heads of sunflower should be collected from the field and carried to the threshing floor and dried in the sun for 2-3 days. Threshing should be done by beating with a piece of wood or a bamboo stick. Seeds should not be broken during threshing. Seeds should be dried in the sun for 4-5 days and then stored in air tight containers, polythene lining gunny bags and polythene bags.
<b>3.</b>	<b>Yield/ha(Ave)</b>	: 1.7-1.9 kg/ha
<b>4.</b>	<b>BARI released varieties</b>	: Kironi (DS-1), BARI Surjomukhi 2
<b>5.</b>	<b>Characteristics of BARI Shurjomukhi 2</b>	
i)	Plant height (cm)	: 125-140
ii)	Stem diameter (cm)	: 2.0-2.8
iii)	Matured headdiameter (cm)	: 15-18
iv)	1000 Seed Weight (g)	: 65-70
v)	Seed Color	Black
vi)	No. of Seed/Head	: 450-650
vii)	Days to flowering	: 57-65 days
viii)	Life cycle (days)	Rabi 100-105 Kharif 85-90
ix)	Yield (ton/ha)	: Rabi 2-2.3 Kharif 1.5-1.8
x)	Oil content (%)	: 42-44
xi)	Disease Resistance	: <i>Alternaria</i> Leaf blight tolerant.