# MASH CULTIVATION

*Mash* was grown on 2.8 thousand hectares and the total production was 1.3 thousand tonnes in the Punjab State during the year 2009-2010. The average grain yield was 464 kg/ha (184 Kg per acre).

***Climate and Soil Requirements :***
*Mash* thrives in a hot and humid season (July to October). However, short duration types (70 to 75 days) can be grown in the central and sub-montaneous tracts in summer (March to June). *Mash* can do well on all soils ranging from sandy loam to heavy clay except the saline-alkaline or water logged soils. Its cultivation improves soil fertility. The *mash*-wheat rotation is suitable for irrigated areas.

**Improved Varieties**
***Mash 114 : (2008) :*** This variety is recommended for the whole Punjab state. Its plants are dwarf, erect and compact with determinate growth habit. It is a short duration variety and matures in about 83 days. Podding is profuse and each pod contains about 6-7 seeds, which are bold, black and possess very good culinary properties. Average grain yield is about 3.6 quintal per acre. It is fairly resistant to yellow mosaic virus, bacterial leaf spot and cercospora leaf spot diseases.

***Mash 338 (1993)*** : This variety is recommended for the whole Punjab State. Plants are dwarf, erect and compact with determinate growth habit. It is a short duration variety and ripens in about 90 days. Podding is profuse and each pod contains about 6 seeds, which are bold, black and possess very good culinary properties. Average grain yield is about 3.5 quintal per acre. It s fairly resistant to yellow mosaic virus, bacterial leaf spot and cercospora leaf spot diseases. It is also tolerant to
jassids and whitefly.

***Mash 1-1 (1966)*** : This variety is recommended primarily for the humid tracts of the Punjab State. Plants are tall, spreading with indeterminate growth habit. It is a long duration variety and ripens in about 115 days. Podding is moderate and each pod contains 5-6 seeds which are bold, black and possess very good culinary properties. Average grain yield is about 3.5 quintals per acre. It is fairly resistant to fungal and viral diseases.

**Agronomic Practices**
***Land Preparation*** : One or two ploughings followed by planking are enough. At sowing field should be free from weeds.

***Seed Rate*** : Use 6-8 kg seed per acre. Use bold seeds retained over the sieve with a mesh size of 3.6 mm for higher yields.

**Time and Method of Sowing :** Sow the irrigated crop from 15 to 25 July in the Sub-montaneous region and from last week of June to the first week of July in other area of the state. The rainfed crop may be sown with the onset of the monsoon. It should be sown in lines, 30 cm apart by using the *kera*/*pora* method or with a seed drill, 4 to 6 cm deep. To make cultivation of *mash* more economical, maize may be inter cropped at every fifth row. The rows 30 cm apart should be oriented preferably along North-South direction. 65 *Mash* and maize inter crop culture should be fertilized as per recommendation for *mash* at the sowing time. Subsequent top-dressings of N to maize rows be carried out at the recommended level and proportionate to area under maize.

***Weed Control*** : Hoe the crop one month after sowing. Later, the crop covers the ground well and does not allow the weeds to come up. Weeds can also be controlled by applying Stomp 30 EC (pendimethalin) @ 600 ml per acre and one hoeing 25 days after sowing or Stomp 30 EC @ one litre per acre. Stomp should be sprayed within two days of sowing of the crop. For spraying

herbicide use 150-200 litres of water per acre. The herbicide provides good control of many annual weeds in early growth stages but does not control perennial weeds.

*Irrigation* : The crop normally needs no irrigation. If the rains fail for a long period, then apply one irrigation.

### *Fertilizer Application* :

Drill at sowing, 5 kg of N (11 kg of Urea 46% N), alongwith 10 kg of $P_2O_5$ (60 kg of single superphosphate 16% $P_2O_5$) per acre.

### *Harvesting* :

Harvest the crop when the leaves are shed and most of the pods turn greyish black. The matured crop should not be uprooted.

**Plant Protection Measures :** (See under *moong*)