1. **Cluster bean (Guar) (***Syamopsis tetragonoloba* )

**Botany and importance**

It belongs to Leguminosae family, locally known as Guar. It is highly important Leguminosae crop of the kharif season. It is grown in our country mainly as a green fodder, but also for use as grain, green manure and a vegetable. It is known for its drought resistance and its soil-renovating qualities. It is also used as animal feed. By mixing guar with non-leguminous crops gives fodder with high nutritious value.

**Climate**

Guar performs better under warm and dry weather conditions. It can tolerate water scarcity for long time.

**Varieties**

BR-99, BR-90, BR-2017

**Soil and seedbed preparation**

Well drained, medium to light soils are best for cultivation. One to two ploughings followed by one planking are sufficient to prepare the seed bed.

**Sowing time**

* Fodder crop should be planted from 15 April-July
* Grain crop is planted in July.
* For green manuring, it is cultivated in May.

**Seed rate**

* Use 20-25 kg/acre for fodder crop.
* Use 12-15 kg/acre for grain crop.

**Sowing method**

The broadcast method is common for fodder crop but sowing in lines 1 feet apart with drill gives better results.

**Fertilizer application**

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| **Crop** | **At sowing time** |
| Guar | 1 bag DAP/acre |

**Irrigation**

About 2-33 irrigations are sufficient for fodder crop depending upon the main crop with which it has been sown (mixed).

**Diseases**

Wilt is common disease of guar. Seed treatment with proper fungicide is helpful to control it.

**Insects**

Jassid and white fly are insect of this crop. Use recommended insecticide to control insects.

**Time of harvesting and production**

Fodder crop is ready in 11/2-2 months; however, grain crop is ready in November. In irrigated areas, fodder production is about 350-500 monds/acre and in rainfed areas, about 150 monds/acre.

1. **Jantar**

**Botany and importance**

It belongs to family…………. Mostly Jantar is cultivated as green manure crop to increase the soil fertility. However, it is also cultivated as fodder in some areas. especially, it is favorite feed of small animals. Its seeds have high amount of gum.

**Climate**

It thrives in a warm and humid climate.

**Soil and seedbed preparation**

Light sandy loam soils are suitable for Jantar cultivation. Seedbed can be prepared with 2-3 ploughings with a cultivar along with planking.

**Sowing time**

This crop can be planted from mid-March to End-August.

**Seed rate**

* Use 20-25 kg per acre for fodder and green manure production.
* Use 10-12 kg per acre for seed production.

**Sowing method**

Usually broadcast method is used for sowing but sowing in lines one feet apart through drill gives better production. For seed crop, lines distance should be one feet and for fodder crop, distance should be 11/2-2 feet.

**Fertilizer application**

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| **Crop** | **At sowing time** |
| Jantar  | 1 bag DAP/acre  |

**Irrigation**

Apply irrigation after 18-22 days of sowing. After that apply irrigation as required.

**Insects**

Aphid attack is seen on this crop. Concern to agriculture extension staff to control attack.

**Time of harvesting and production**

* For green manuring, incorporate the crop in soil after 40-50 days.
* For fodder, cutting is done after 70-80 days at 50% flowering is done.
* Seed crop is harvested after 120 days when beans are ripened.