JUTE FARMING

SOIL REQUIREMENTS: -

- Jute grows best in well-drained, fertile soils that are rich in organic matter. Sandy loam soils are preferred, but jute can also grow in clay loam soils.
- Jute grows best in slightly acidic soils with a pH range of 6.0 to 6.5. Soil pH can be adjusted using lime or sulfur, depending on the initial pH level.
- Jute requires adequate soil fertility to support its growth and yield. Before planting, soil should be tested for nutrient levels, and fertilizers should be applied as needed to correct any deficiencies. Organic matter can also be added to improve soil fertility and structure.
- Jute requires consistent soil moisture throughout its growth cycle, but excess water can lead to waterlogging and crop failure. Irrigation should be provided as needed, and drainage should be improved if necessary.
- Jute grows best in warm temperatures, with a minimum temperature of 25°C and a maximum temperature of 35°C. In cooler climates, jute can be grown as a summer crop.

- Jute requires a loose and friable soil texture that allows for good root development and water penetration. Soil compaction should be avoided, and tillage should be minimized to preserve soil structure.

CLIMATE & TEMPARATURE: -

Temperature: Jute requires warm temperatures to grow and mature properly. The optimal temperature range for jute growth is between 25°C to 35°C, and the minimum temperature for growth is around 15°C. Temperatures above 40°C can be detrimental to jute growth and yield.

Humidity: Jute requires high humidity throughout its growing period. The optimal humidity range for jute is between 70-80%, and relative humidity below 50% can lead to water stress and reduced yield.

Rainfall: Jute requires a well-distributed rainfall pattern throughout its growing period. The crop requires around 2000-2500 mm of annual rainfall, with more than half of the rainfall occurring during the monsoon season. Excessive rainfall can cause waterlogging and crop damage, so proper drainage is essential.

Sunlight: Jute requires abundant sunlight for growth and development. The crop requires at least 8 hours of sunlight per day.

Altitude: Jute is best suited for lowland areas, as it does not grow well at high altitudes. The crop is usually grown at elevations below 1000 meters above sea level.

PLANTING SESSION & MATERIAL: -

- Jute is usually grown as a summer crop and is planted between March and May, depending on the local climate conditions. The crop requires warm temperatures, high humidity, and adequate rainfall to grow and mature proper.

- Jute requires a well-prepared seedbed that is free of weeds and other crop residues. Land should be plowed, harrowed, and leveled

to create a smooth and even surface. Jute can be planted directly into the seedbed, or seedlings can be transplanted from nurseries.

- Jute seeds should be obtained from a reputable source and should be of good quality. Seeds should be cleaned and treated with fungicides and insecticides before planting to prevent seedling diseases and pests.

- Jute should be planted at a density of around 30-40 plants per square meter. The spacing between rows should be around 45-60 cm, and the spacing between plants within rows should be around 15-20 cm.

- Jute requires adequate moisture throughout its growth cycle, so irrigation should be provided as needed to maintain soil moisture. Over-irrigation, however, can lead to waterlogging and reduced yield.

PLANTING METHOD: -

Direct sowing: Direct sowing is a common planting method for jute, where seeds are sown directly into the seedbed. In this method, the land is prepared by ploughing, harrowing, and levelling, and then the seeds are sown in rows. The spacing between rows should be around 45-60 cm, and the spacing between plants within rows should be around 15-20 cm. After sowing, the seeds are covered with a thin layer of soil and watered regularly**.**

Transplanting: Transplanting is another planting method for jute, where seedlings are raised in a nursery and then transplanted into the field. In this method, the nursery bed is prepared by sowing jute seeds and then thinning the seedlings to ensure proper spacing. The seedlings are then

uprooted and transplanted into the field after around 20-30 days. Transplanting is usually done during the early morning or late afternoon to avoid excessive heat stress.

Broadcasting: Broadcasting is a less common planting method for jute, where seeds are scattered evenly across the seedbed without any arrangement. This method is usually used in areas with low fertility or for intercropping with other crops**.**

FERTILIZERS: -

Fertilizer management is crucial for the growth and development of jute plants and can have a significant impact on yield and fiber quality. Here are some common fertilizers used in jute farming Phosphorus (P) lacking in the soil.

- Nitrogen (N)
- Phosphorus (P)
- Potassium (K)
- Calcium (Ca)
- Magnesium (Mg)

PESTS AND DISEASES: -

Jute stem weevil: Jute stem weevil is a major pest of jute, which damages the stem and reduces fiber yield. The larvae of the weevil bore into the stem, causing wilting and lodging. Farmers can manage jute stem weevil by using resistant varieties, practicing crop rotation, and applying insecticides.

Jute leafhopper: Jute leafhopper is another major pest of jute, which damages the leaves and reduces photosynthesis. The leafhopper feeds on the underside of the leaves, causing yellowing and drying. Farmers

can manage jute leafhopper by using resistant varieties, practicing crop rotation, and applying insecticides.

Fusarium wilt: Fusarium wilt is a fungal disease that affects the roots and stems of jute, causing wilting and plant death. The disease is spread through infected soil or seed. Farmers can manage Fusarium wilt by using resistant varieties, practicing crop rotation, and applying fungicides.

Microphobia wilt: Microphobia wilt is another fungal disease that affects the roots and stems of jute, causing wilting and plant death. The disease is spread through infected soil or seed. Farmers can manage Microphobia wilt by using resistant varieties, practicing crop rotation, and applying fungicides.

Bacterial blight: Bacterial blight is a bacterial disease that affects the leaves and stems of jute, causing yellowing, wilting, and plant death. The disease is spread through infected seed or plant material. Farmers can manage bacterial blight by using disease-free seed or plant material, practicing crop rotation, and applying bactericides.

HARVESTING OF JUTE: -

- Jute plants are harvested when the fibbers have matured, which typically occurs between 120 and 150 days after planting.
- After cutting, the jute stems are immersed in water for several days to loosen the fibers from the stem. This process is known as retting, and it can be done in ponds, rivers, or tanks. Retting time can vary depending on the water temperature and quality, but it typically takes between 5 and 14 days
- Overall, jute harvesting requires careful timing and attention to detail to ensure that the fibers are of high quality and free from damage. It is important to use sharp cutting tools and to handle the fibers gently to avoid damage or breakage.