**C.N: Watermelon**

**S.N: *Citrullus lanatus***

**Family: Cucurbitaceae**

**Description**

Watermelon, Citrullus lanatus, is a vining annual plant in the family Cucurbitaceae grown for its fleshy fruit. Watermelon vines are thin, grooved and covered in tiny hairs. Vines are branching and possess deeply lobed pinnate leaves. The plant produces solitary yellow flowers and a large spherical to oblong fruit. The fruit is a 'pepo' - a fleshy fruit protected by a thick leathery rind.

The fruit is smooth, light to dark green in color and can be striped, marbled or solid green. The flesh of the fruit is usually red in color but some cultivars produce green, orange or white flesh and contains numerous seeds which are usually black or dark brown in color. Watermelon vines can reach a length of 3 m (10 ft) and as an annual, survives only one growing season. Watermelon originates from Africa.

**Sowing seeds**
Watermelon can be direct seeded in areas with a long, warm growing season but in more Northern climates it should be sown indoors and transplanted. If direct seeding, seeds should be sown after the last frosts and when the soil has warmed to at least 18.4°C (65°F). Allow 90–120 cm (~3–4 ft) between seeds in a row and 150–180 cm (~5–6 ft) between rows. If transplanting, seeds should be sown approximately 3–4 weeks before the last frost date in your area and transplanted after the plants develop their first set of true leaves. Sow seeds in 3–4 in pots using a sterile seed starting mix and planting to a depth of 1–2 cm (~0.5 in). Thin seedlings once they are established. Seeds sown both indoors and out require lightly moist soil for germination, care should be taken to avoid overwatering as seeds are prone to rotting. Seeds should germinate in 3–10 days depending on the soil temperature**.**

**Watermelon Varieties:**

1. **Klondine:** One of the most sweet. It is bright red. typically weighing 9-15kg.
2. **Jubilee:** It is thicker and pinkish red. Between 10-15kg.
3. **Party:** It is one of the sweetest variety because of it is high sugar content dark green with lighter, between 9-11kg.
4. **Crimson Sweet:** Very sweet , yellow with green stripes.

**Common Pests and Diseases**

**Diseases**

**A.Category: Fungal**

**1. Alternaria leaf blight**

**2. Downy mildew**

**B. Category : Bacterial**

**1. Angular leaf spot**

**2. Bacterial fruit blotch**

**C.  Category : Viral**

**1. Cucumber green mottle mosaic**

**2.  Watermelon mosaic**

**Pests**

**D. Category : Insects**

**1. Aphids (Peach aphid, Melon aphid)**

**2.****Cutworms**

**3.Flea beetles**

**4. Thrips**

**C.N: Okra**

**S.N: *Abelmoschus esculentus***

**Fam.: Malvaceae (Hibiscus)**

**Description**

Okra, *Abelmoschus esculentus*, is an herbaceous annual plant in the family Malvaceae which is grown for its edible seed pods.

**Stem:** Okra plants have small erect stems that can be bristly or hairless.

**Leaves:** The leaves are 10–20 cm (4–8 in) long with 5–7 lobes, heart-shaped leaves.

**Flowers:** The plant produces flowers with five white to yellow petals which are 4–8 cm (1.6–3.1 in) in diameter.

**Seed pod:** The seed pod is a capsule up to 25 cm (10 in) long, containing numerous seeds. Okra can grow 1.2–1.8 m (4–6 ft) tall.

**Propagation**
Okra is typically propagated from seed. Soaking seeds in water overnight prior to planting helps the plants to germinate. In the home garden, seeds should be sown at a depth of 2.5 cm leaving 25–45 cm between rows only after the soil has reached a temperature of 18°C. In commercial okra production, seeds are planted in rows spaced 0.65–1.0 m apart. Seedlings are thinned to a final spacing of 15.0–22.5 cm when they are 4–6 weeks old to produce the final plant stand.

**Okra Varieties Varieties**

1-Annie Oakley: hybrid; Clemson Spineless type; spineless pods slightly ribbed.

2-Burgundy: burgundy-colored pods; dwarf plants grow to only 4 feet; plant has ornamental appeal with red in stems and leaves.

3-Cajun Delight: five-sided; dark green pods.

4-Clemson Spineless: leading home garden variety; straight pods tapered, ridged, spineless; less foliage than Perkins Spineless; 65 days.

**Common Pests and Diseases**

**Diseases**

A.Category: Fungal

1. Charcoal rot *Macrophomina phaseolina*
2. Fusarium wilt *Fusarium oxysporum*
3. Powdery mildew *Oidium asteris-punicei*

B.Category: Viral

 1. Enation leaf curl disease Okra Enation Leaf Curl Virus (OELCV)

 2. Yellow Vein Mosaic Disease Bhendi Yellow Vein Virus (BYVMV)

Pests

A.Category: Insects

1. Aphids (Green peach aphid, Potato aphid, etc.)
2. Armyworms (Beet armyworm, Western striped armyworm)
3. Loopers (Cabbage looper)

B.Category: Nematodes

 1. Root-knot nematode

C.Category: Mites

 1. Spider mites (Two-spotted spider mite)