**C.N: Cucumber**

**S.N:** **(*Cucumis sativus)***

**Family: (**Cucurbitaceae) (Gourd Family)

**Plant Description**: Cucumber is an annual crop consists of the following parts:

**Roots:** The primary roots are strong and grow vertically to about 120 cm depth. Secondary roots distribute on the surface covering an area of about (60-90) cm wide**.**

**Stem**: The stems of the cucumber are prostrate, angular, and covered by rough hairs. The length of the main stem may be (2-3) m.

**Leaves**: The leaves are large, simple, and alternate with dark green color and have a slightly rough texture.

**Flowers**: Flowers of most cultivars are unisexual and monoecious. Few cultivars are andromonoecious (bears both hermaphrodite and stamen (male) flowers in the same plant).More other cultivars are gynoecious (bears female flower only) which used in protected planting.The yellow flowers have 4-5 calyxes. Male flowers are single or borne in clusters, Smaller than female flowers .Female flowers are solitary.

**Fruits:** The fruit is cylindrical, solid and succulent berry with many seeds. The length of the fruit is ranging between (8-40) cm according to the variety. Fruits change color from pale green when young to white, yellow or brown when ripened depending on the color of fruit spines**.** Eachplant produces up to 25fruit**.**

**Seeds**: Seeds are light yellow and the weight of 1000 seeds is about 20-30 g. There are about 150 - 500 seeds per fruit.

**Cucumber varieties**: Cucumber varieties can be classified according to the following characteristics:

**1-Classification according to the purpose of use:**

a-**Slicing varieties**: Moderate to long cylindrical fruits covered with small white hairs like Beit-Alpha and market more varieties.

b-**Pickling varieties** : Short to medium cylindrical fruits with black hairs like Sampson variety.

**2- Classification according to their content of seeds:**

**a-Parthenocarpic varieties** **which do not needs** **pollination**: Which are usually female cultivars free from seeds if it not pollinated ,used in green houses.

b-**Varieties need pollination to form the fruits and it contain the seeds.**

**3- Classification according to the flowering habit:**

a-**Monoecious:** Produce both male and female flowers on the same plant.

b-**Gynoecious**: Produce female flowers only. These hybrids are early maturity and give high yield quantity compared with the monoecious varieties

**4- Classification according to the propagation method:**

**a- Open pollinated:** These cultivars propagatedby natural cross pollination after isolating the plants from the plants of the other fields.

**b- Hybrids**: These varieties cannot be propagated until using the proper pollination between the parents.

**5- Classification according to the fruit shape:** Fruits may be global, cylindrical and may be thick or thin, short like pickle varieties , moderate or long or very longfruits like American varieties.

**Reproduction method**: Cucumber is reproducted sexually by seeds every donum needs about 800 gm of seeds.

**Planting method:** The cucumber is cultured directly by seeds in uncovered fields in wide rows separated by 1.25 m from each other only on one side or in two sides the distance between the rows must be (2-3) m and between the plants must be 30 cm. Every halls need 3-5 seeds then it thinned to 2 plants in every halls after germination. Cucumber also cultured in wide areas inside green houses, plastic houses and low tunnels in order to obtain cucumber fruits along the year. The bitter taste in cucumber is appeared because of the presence of an alkaloidal substance called cucurbitacins sometimes this substance is produced as genetic feature in a variety. Also some cultural process like lake of irrigation caused this problem.

**Diseases and insects:**

**Diseases:**

1. Damping off
2. Fusarium Wilt
3. Alternaria blight
4. White Mold
5. Scab
6. Gummy stem blight
7. Cucumber mosic virues

**Insects:**

1. Cut worm
2. Cotton leaf worm
3. Whitefly
4. Cotton thrips
5. Aphids