

# WATERMELON CULTURE

Scientific name: *Citrullus vulgaris* Schrod, Cucurbitaceae

Watermelon, commonly known as “pakwan” in Tagalog, is probably native to Africa. It is mainly eaten as dessert fruit. The rind is made into preserves and pickles; the seeds are processed into butong pakwan. In 1982-83, the area planted to watermelon was 15,410 hectares with a total production of 75,650 metric tons of fruits; but area was reduced to 5,370 hectares in 1983-1984 and production went down to 57,000 metric tons of fruits. The demand for watermelon could go up as foreign markets like the USA offered to buy all the watermelon the country can produce.

## VARIETIES

Varieties commonly grown in the Philippines are Valencia, Meak, Klondyke, Northern Hybrid, Tender Sweet, honey Cream and Mallorca.

Foreign varieties Accessions 193490 and 293964 from Africa;



Accessions 183217 and 164539 from India; Festival Queen, Glory, Charleston Gray and Sugar Baby.

Elevation - Watermelon is grown commercially in lowland areas after rice harvest. These provinces are Bataan, Bulacan, Pampanga, Tarlac, Nueva Ecija, Rizal, Batangas and Laguna.

Months of planting - Planting season is from October to January. In some parts of the country, planting is done as early as August to produce an off-season crop which commands better market price.

## CULTURE

Plow land at least 20 cm deep to increase soil aeration. Plow and harrow 2-3 times for early growth and development. These are done several weeks in advance of planting to condition soil. Though this is quite expensive, labor cost of weeding will be reduced.

**Planting and spacing** - Watermelon is grown from seeds directly planted in the field. Plant 3-4 seeds to a hill, 2.5 cm deep. Distance of planting ranges from 1.5 x 1.5 to 2.5 x 2.5 meters apart, depending on variety.



## FERTILIZATION

Watermelon is generally grown in rotation with other crops; it is necessary to use manure or any soil-improving crop to maintain organic matter in the soil. Apply 10 to 15 tons of manure per hectare. Apply complete fertilizer at



the rate of 100 to 150 kilograms per hectare at planting time by hand placement 5 to 8 cm below the soil and 5 to 6 cm away to the side where seeds are placed. If plants show signs of yellowing, apply sidedressing or nitrogenous fertilizer.

Watermelon has a spreading, hairy, tendril-bearing vines reaching 3-5

meters long. Leaves are oblong-ovate 8-20cm long with 3-7 lobes. Flowers are monoecious, yellow in color and about 2 cm in diameter. Fruits are large, green-mottled or deep green. Introduced hybrids and varieties produce much bigger fruits, shapes varying from globular to oblong.

## SOIL AND CLIMATE



Watermelon prefers a well-drained sandy loam soil rich in organic matter and which has not been previously planted to watermelon. Watermelon requires more aeration than any other kind of crops, so the field must have good drainage to obtain good yield. In areas where growing season is short, light soil is desirable for early harvest. It grows satisfactorily in heavier soil if properly cared and managed.

Watermelon is tolerant to a wide range of soil acidity with soil pH 5.0 to 6.8 to successful growth. A long period of warm, preferably dry weather contributes to growth. A temperature of 25°C to 30°C is ideal for growth and 25°C is the best temperature for fruit setting.

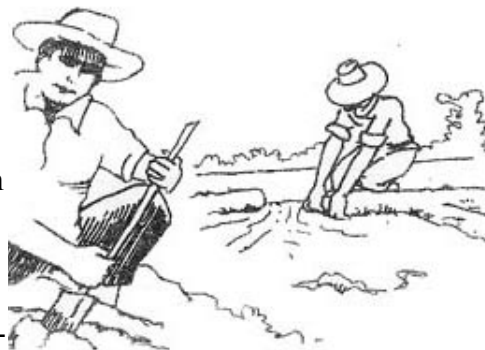
After plants are well-established, thin to one to two plants per hill. Alternate plant is planting in continuous rows and thinning the plant to a distance of 1.5 to 2.0 meters. When plants have 3-4 leaves, thin to one plant per hill.

## CULTIVATION

Cultivate and weed to check weed growth. Any implement may be used for the purpose. Avoid injury to roots while cultivating.

## IRRIGATION

Watermelon may suffer injury when exposed to a long period of drought. Apply irrigation water when necessary. Frequent



light irrigation 5-6 times during growing season is beneficial. During early stage of growth, irrigate sparingly since too much water tends to hinder root development.

## PEST AND DISEASES

**Cucurbit beetle** - Adults are yellow beetle 6 to 8 mm in length. They eat leaves of young and old plants.

**Aphids** - Adults and young are tiny, greenish insects generally wingless and soft-bodied. Insects suck the sap of leaves. Infested plants show curling and distorting of leaves.

**Mites** - Very tiny insects usually found on undersurface of leaves. Adults are reddish in color.

**Downy Mildew** - Caused by *Pseudoperonospora cubensis* Berk and Curt. Characterized by the presence of yellow spots on upper surface of leaves and purplish powdery material on lower surface.

## CONTROL OF PEST AND DISEASES

Treat the wa-

termelon seeds with appropriate fungicides to minimize early development of diseases in the field.

Dust or spray the young plants regularly with any suitable insecticides as soon as the false leaves have spread. At the seedling stage, watermelon are easily attacked by insect pests.

## HARVESTING

Harvest watermelon fruits when mature enough to be sweet. Generally, it takes a watermelon fruit to mature 35 to 40 days from pollination depending on the variety. The old method of determining maturity of watermelon is by "thumping" with a finger. a dull or hollow sound is an indication of maturity. The most practical index,

However, is when the color of the lower part of the fruit that rests on the ground changes from white to creamy yellow. Harvest fruit with a sharp knife.

## POST HARVEST ACTIVITIES

Pilenewly harvested fruits in shaded areas. Do not bruise fruits during sorting, packing and shipping.