

# Watermelon Growing Tips



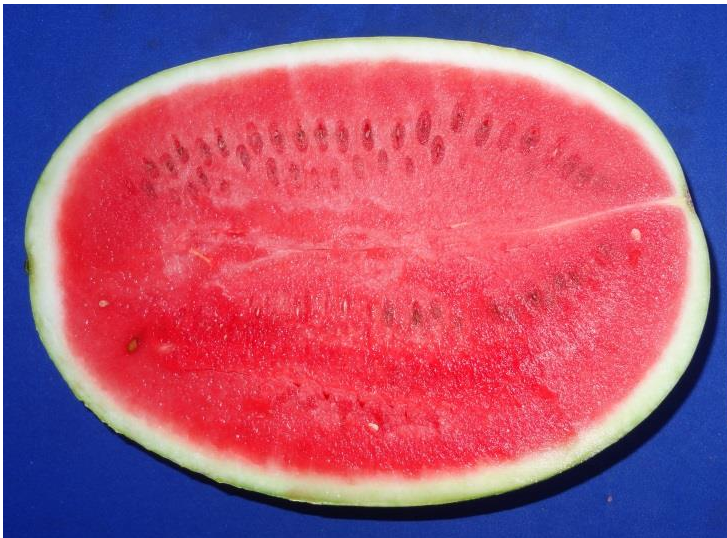
**Sukari F1**  
**Cultivation**  
**Practices**



**East African Seed Co. Ltd**

**Africa's Best**

# Sukari F1



- **Maturity: 80 – 90 days**
- **Fruits are oblong in shape**
- **Avg fruit weight is 7 – 8 kgs**
- **The rind is light green with dark green stripes**
- **The flesh is deep red, crispy & firm**
- **TSS 11 – 12 %**
- **Thick rind: Good for long distance transport**
- **Yield Potential: 25 tons/Ac.**

# Climatic Requirements

- Long, warm growing periods
- Bright, hot days (27 – 35 °C)
- Warm nights (16 – 21 °C)
- **Cool Temp & Excessive RF:** Delay germination, Slows growth, poor fruit setting, hallow fruit
- **High humidity:** Suceptible to various diseases & Reduce the flowering

# Soil Requirements

- Sandy loam
- Rich in organic matter & good drainage
- **Heavy textured soils:** Slower crop development & Cracked fruits
- Soil pH: 6 – 7
- Apply lime if soil pH is too low

# Seed Requirements & Sowing Method

- **Seed Rate:** 500 – 600 gms per acre

- Planting:

## Single row system:

Row spacing: 2.0 -2.5 metres

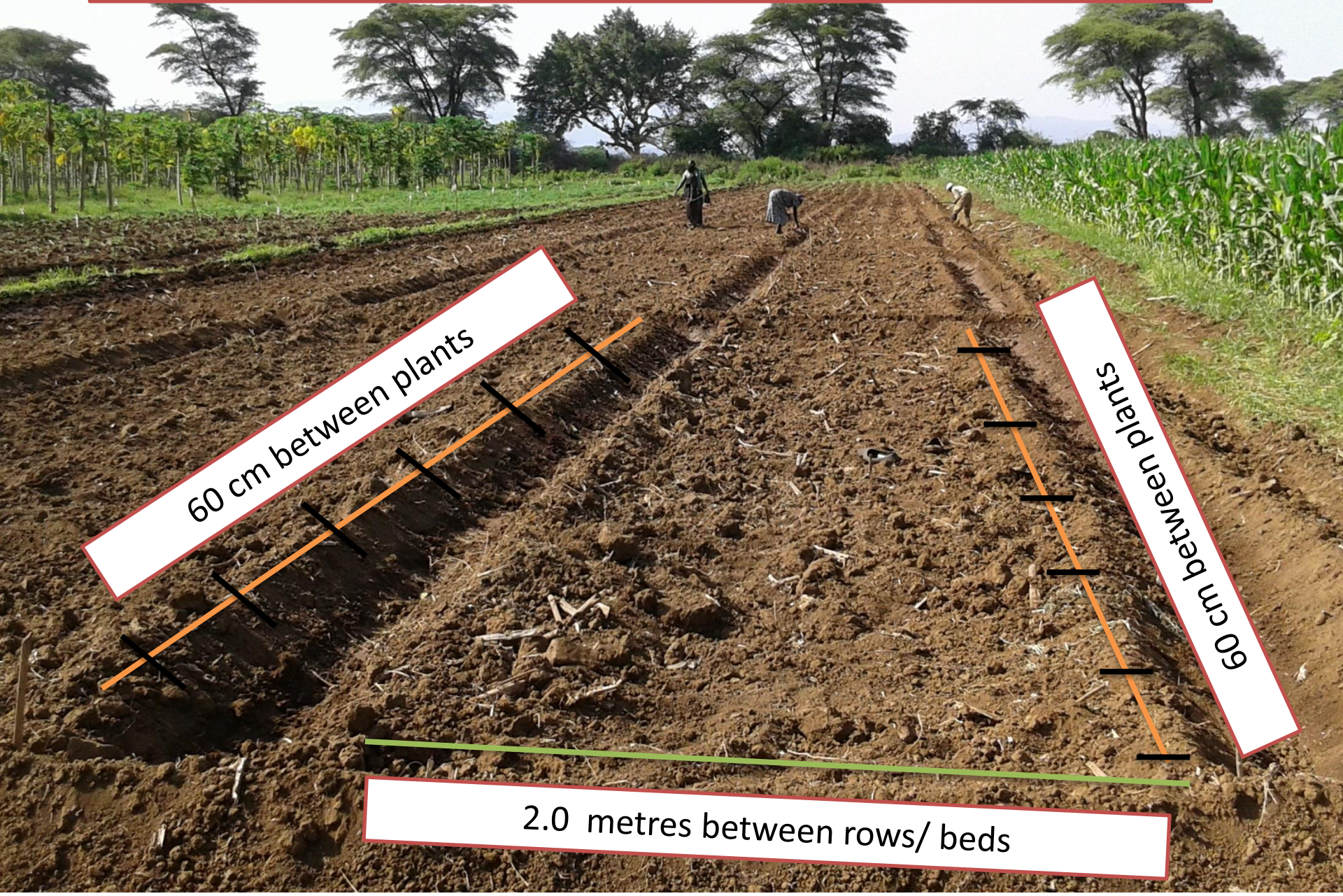
Plant spacing: 60 cm

## Double row system:

Row spacing: 3.5 – 4.0 metres

Plant spacing: 60 cm

# Planting Method – Single row system

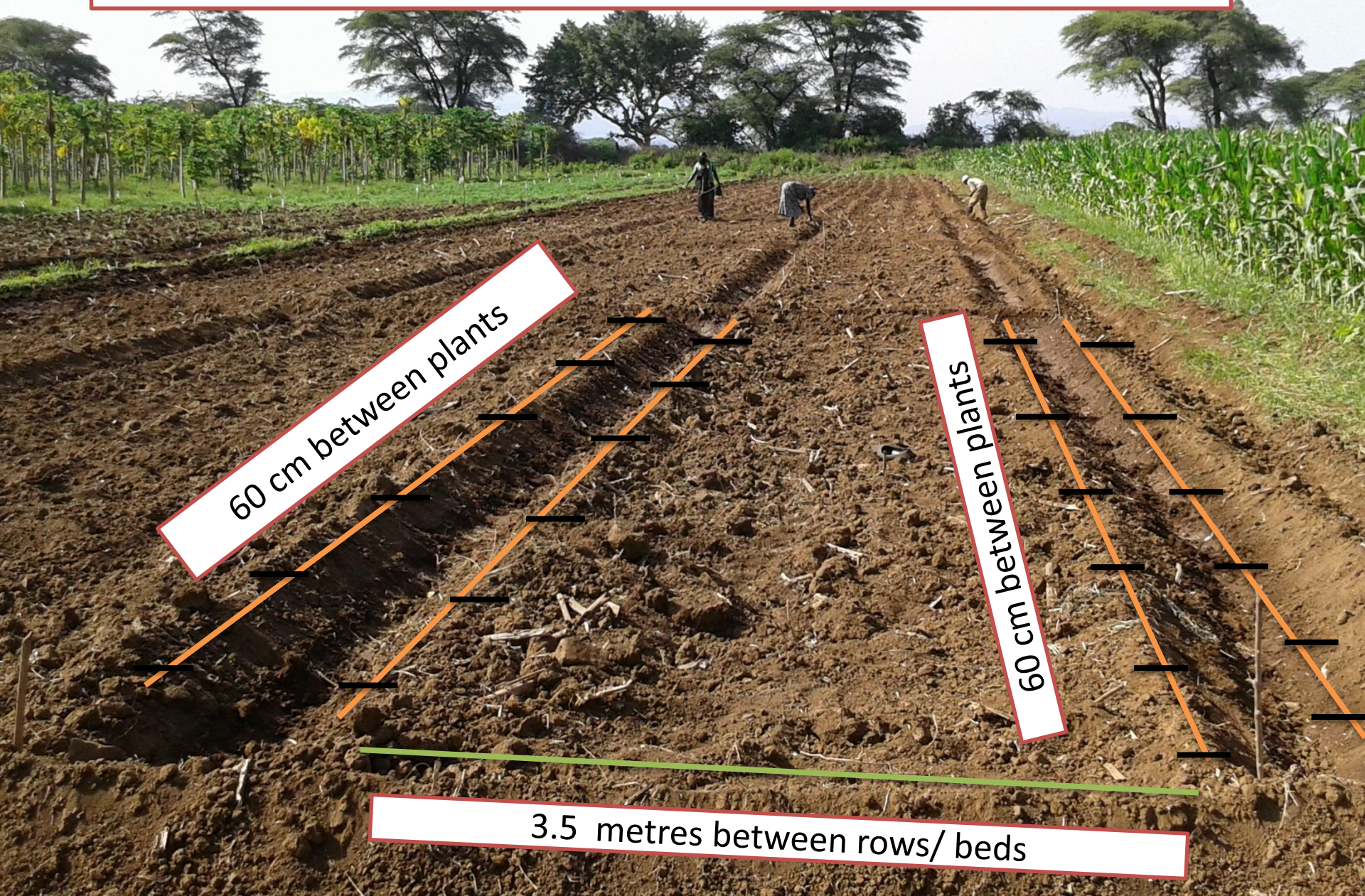


60 cm between plants

60 cm between plants

2.0 metres between rows/ beds

# Planting Method – Double row system



60 cm between plants

60 cm between plants

3.5 metres between rows/ beds

# Planting Method – Kerio Valley

**Wider spacing 7 X 1 Metre – Not recommended**



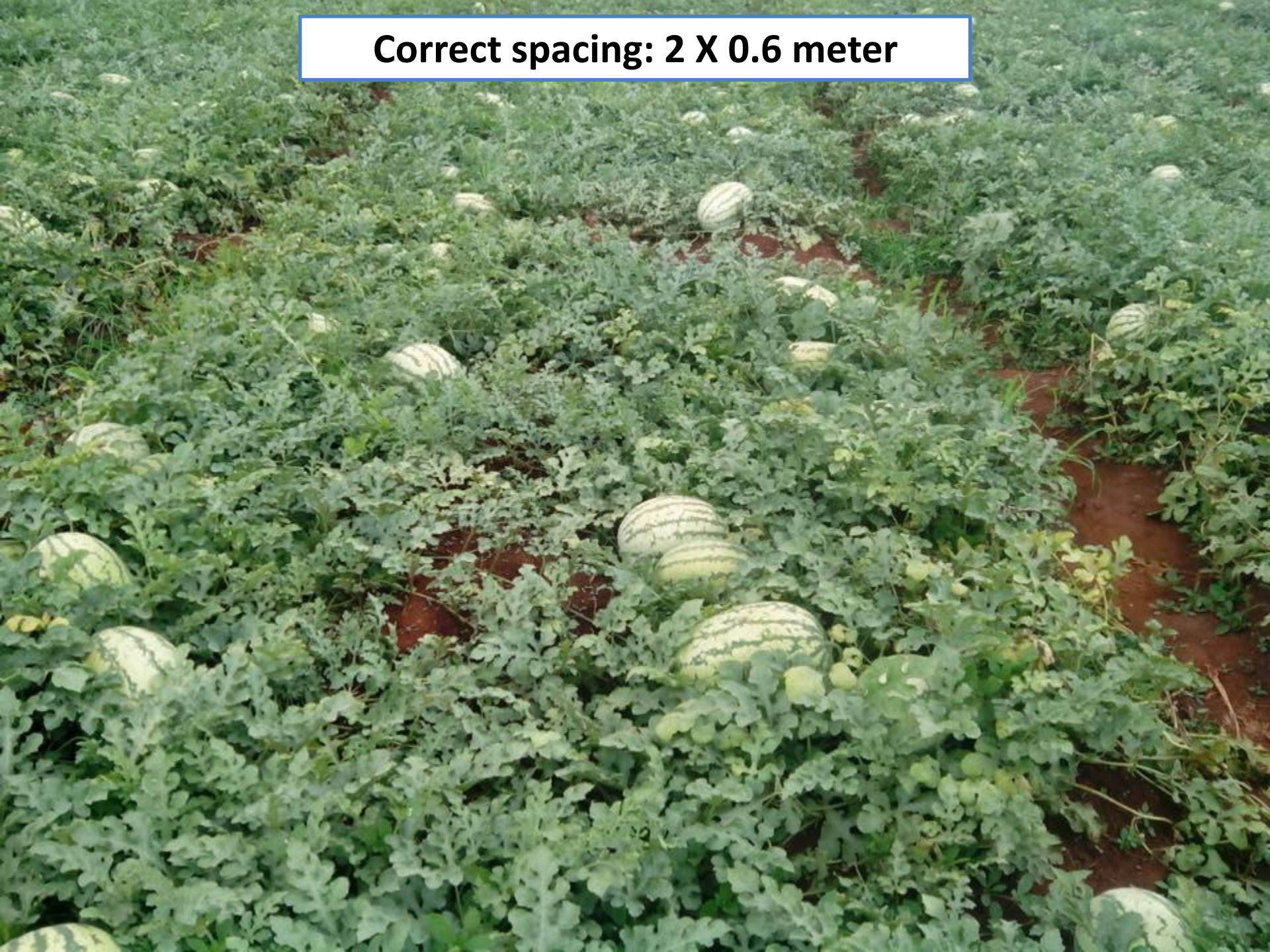


# Planting method - Ngoliba

Spacing 2 X 0.6 Metre – Recommended



**Correct spacing: 2 X 0.6 meter**



# Manure's & Fertilizer's

- FYM: 5-8 tons/acre

## Basal:

2 bags of NPK 17:17:17 or 2 bags DAP & 1 bag MOP

## Top Dress:

1 st : 1 bag CAN @ 25 Days after Planting

2 nd: 1 bag CAN @ 45 Days after Planting

## Micronutrients:

Ca, Bo & Mg spray @ Vegetative, flowering and fruit setting stage

# Inter Cultivation

- Crop Rotation: Cereals / Legumes / Pulses for at least 2 seasons.
- Weeding: regularly to keep the field clean.
- Irrigation:
  1. Irrigate the field before dibbling the seeds and thereafter once a week
  2. Irrigation after long spell results in cracking of fruits
  3. **Most critical stages**: Flowering & Fruit setting

# Pollination

- Cross pollination : Insects (Honey bee)
- 1-2 bee hives/ acre
- Early – mid morning (9 am – 12pm) is the best time for pollination
- Avoid chemical spraying in the morning hours during flowering stages
- Insufficient pollination results in misshapen fruits

# Flowers & Pollination



Male & female flower



3 locule stigma



Pollination by honeybee

# Maturity Indicators

- Immature dark green fruits turns to light green or yellowish
- Tendrils or pigtails on veins starts drying
- The ground spot on the belly of the melon turns yellow
- Mature fruits produce soft hallow sound

# Harvesting

## Precautions:

- Immature fruits have poor inner content
- Over mature fruit is fibrous and not palatable

## Yield:

- Average yield 15 tons/acre
- Yield potential 25 tons/acre under good agronomic mgt practices



# Disorders

Disorders	Symptoms & Causes	Control
Bottle neck / Mis-shapen fruit	<p>Constricted growth at the stem end of the fruit. <b>Causes:</b></p> <ul style="list-style-type: none"> <li>• Poor pollination</li> <li>• Moisture stress</li> <li>• Low Temperature</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid chemical spraying in morning hours</li> <li>• Proper Irrigation</li> <li>• Place 1 -2 bee hives to increase bee activity</li> </ul>
Blossom – end rot	<ul style="list-style-type: none"> <li>• Small light brown spots at blossom end of immature fruits</li> <li>• Later stage spot can enlarge rapidly to form dark water soaked lesion.</li> </ul> <p><b>Causes:</b></p> <ul style="list-style-type: none"> <li>• Ca deficiency &amp; moisture stress</li> <li>• Excessive N fertilizer</li> </ul>	<ul style="list-style-type: none"> <li>• Apply lime if soil pH is low</li> <li>• Reduce excess N during fruiting stage</li> <li>• Ca foliar spray @ vegetative, flowering and fruit setting</li> <li>• Uniform &amp; Sufficient supply of moisture</li> </ul>
Fruit cracking	<ul style="list-style-type: none"> <li>• Cool temp during fruit filling stage</li> <li>• Excess N, low Boron</li> <li>• Heavy infrequent watering at fruit maturity stage</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce excess N</li> <li>• Maintain adequate soil moisture</li> <li>• Apply boron before fruit setting or foliar spray</li> </ul>

# Disorders



**Bottle neck /  
Misshapen  
fruits**



**Blossom end rot**



**Fruit cracking**

# Pests

Pests	Symptoms	Control
Melon fly	<ul style="list-style-type: none"> <li>• Maggots of this fly causes damage to young developing fruits</li> <li>• Results in rotting of young &amp; ripened fruits before maturity</li> </ul>	<ul style="list-style-type: none"> <li>• Remove the affected fruits</li> <li>• Place 3 pheromone traps</li> <li>• Spray: Decis (Deltamethrin)/ Match (Lufenuron)/ Thunder (Imida + Beta-cyfluthrin). Add 10 ml molasses per litre to increase the effectiveness of spray.</li> </ul>
Aphids	<ul style="list-style-type: none"> <li>• Deformed, curled leaves.</li> <li>• Small soft-bodied insects on underside of leaves and stems</li> <li>• Sticky honey dew / sooty mould may be present</li> <li>• <b>Vector for Mosaic virus</b></li> </ul>	Spray: Decis (Deltamethrin)/ Actara (Thiamethoxam)/ Confidor or Concord (Imidacloprid)/ Thundar(Imida + Beta-cyfluthrin)/ Dynamec (Abamectin)/ Karate or Swift (Lambdacyhalothrin) / Pegasus (Diafenthiuron)/ Achook, Levo, etc
Red Spider mite	<ul style="list-style-type: none"> <li>• Fine stippling on leaves</li> <li>• Mite feed on the plant sap and can defoliate</li> <li>• Affected leaves become mottled, turn brown and fall</li> </ul>	<ul style="list-style-type: none"> <li>• Remove and burning of infected leaves</li> <li>• Spray: Dynamec or Verkotin or Vapcomic (Abamectin)/ Decis (Deltamethrin), Pegasus (Diafenthiuron)/ Levo, etc</li> </ul>

# Pests



Melon fly



Photo by Scott Bauer, USCA ARS

UGA1317036



Aphids



Red Spider Mite



# Pests

Pests	Symptoms	Control
Thrips	<ul style="list-style-type: none"> <li>• Leaves distorted</li> <li>• Leaves are covered in coarse stippling and may appear silvery</li> <li>• Leaves speckled with black feces</li> </ul>	<ul style="list-style-type: none"> <li>• Avoid planting near onion</li> <li>• Spray: Decis (Deltamethrin)/ Actara (Thiamethoxam)/ Karate (Lambdacyhalothrin)/ Confidor or Concord (Imidaclopid/ Swift (Lambdacyhalothrin)/ Pegasus (Diafenthiuron), etc</li> </ul>
Whiteflies	<ul style="list-style-type: none"> <li>• Leaves turn yellow</li> <li>• Suck plant sap and excrete honeydew where moulds grow</li> <li>• <b>Vector for WMV diseases</b></li> </ul>	<ul style="list-style-type: none"> <li>• Remove infected plants</li> <li>• Spray: Thunder + Oberon/ Actara (Thiamethoxam/ Decis(Deltamethrin)/ Concord (Imidaclopid)/ Karate or Swift (Lambdacyhalothrin)/ Pegasus (Diafenthiuron), etc</li> </ul>
Beetle	<ul style="list-style-type: none"> <li>• Adults feed on foliage &amp; stem causing griddling.</li> <li>• Also feed on the blossom of developing fruits</li> </ul>	Spray: Concord or Confidor Imidaclopid/ Swift(Lambdacyhalothrin)/ Thunder (Imida + Beta-cyfluthrin)/ Karate (Lambdacyhalothrin), etc

# Pests



**Thrips**



**Whitefly**



**Cucumber beetle**

# Diseases

Diseases	Symptoms	Control
Anthracnose	<ul style="list-style-type: none"> <li>• Infection can occur on stems, leaves and fruits</li> <li>• Angular dark brown lesions on leaves with yellow border, elongated lesions with sunken centres on stem &amp; fruit</li> </ul>	<ul style="list-style-type: none"> <li>• Crop rotation</li> <li>• Spray: Score (Difenoconazole) / Ortiva (Azoxystrobin) / Folicur (Tebuconazole)/ Topaz (Tebuconazole)/ Daconil (Chlorothalanil)</li> </ul>
Mosaic	<ul style="list-style-type: none"> <li>• Mottled patterns on leaves</li> <li>• Stunted plant growth, Deformed leaves, mosaic pattern on leaves.</li> <li>• Leaf and fruit distortion</li> <li>• <b>Transmitted by Aphids</b></li> </ul>	Spray: Decis (Deltamethrin)/ Actara (Thiamethoxam)/ Confidor or Concord (Imidacloprid)/ Thundar (Imida + Beta-cyfluthrin)/ Karate or Swift (Lambdacyhalothrin) / Pegasus (Diafenthiuron)/ Levo, etc
Powdery mildew	<ul style="list-style-type: none"> <li>• White, powdery spots on leaves &amp; stems. Spots may enlarge &amp; completely cover leaf. Greyish patches on leaves.</li> <li>• Defoliation may occur, yields reduced.</li> </ul>	<ul style="list-style-type: none"> <li>• Remove old plant debris</li> <li>• Spray: Score (Difenoconazole) / Ortiva (Azoxystrobin) / Folicur(Tebuconazole)/ Topaz (Tebuconazole)</li> </ul>

# Diseases



**Anthracnose**



**Mosaic**



**Powdery mildew**





# Diseases

Diseases	Symptoms	Control
Gummy stem blight	<ul style="list-style-type: none"><li>• Round or irregular brown lesions with faint concentric rings on cotyledon</li><li>• Brown spots on leaves</li><li>• Reddize ooze from runners</li><li>• Black Sunken spots on fruits</li></ul>	<ul style="list-style-type: none"><li>• Crop rotations</li><li>• Spray Daconil (Chlorothalanil) / Sulcop (copper oxychloride)/ Mancozeb, etc</li></ul>
Fussarium wilt	<ul style="list-style-type: none"><li>• Stunting</li><li>• Wilting is followed by a yellowing of the leaves and finally necrosis</li></ul>	<ul style="list-style-type: none"><li>• Crop rotation</li><li>• Avoid water logging areas</li><li>• Spray <b>Rodazim</b> for precautions</li></ul>
Bacterial fruit blotch	<ul style="list-style-type: none"><li>• Small oval water-soaked lesions on fruits, later it turn reddish or brown</li></ul>	<ul style="list-style-type: none"><li>• Rotate crops</li><li>• Avoid over head irrigation</li><li>• Spray Mancozeb+Copper or tebuconazole+copper</li></ul>

# Diseases



**Gummy stem blight**



**Fusarium wilt**



**Bacterial fruit blotch**



**Thank you...**



**E. Kumanan**

**Africa's Best**