



agriculture
& rural development

Department:
agriculture & rural development
PROVINCE OF KWAZULU-NATAL

TOMATO PRODUCTION

LET'S MAKE AGRICULTURE OUR CULTURE



www.kzn.gov.za

TOMATO PRODUCTION

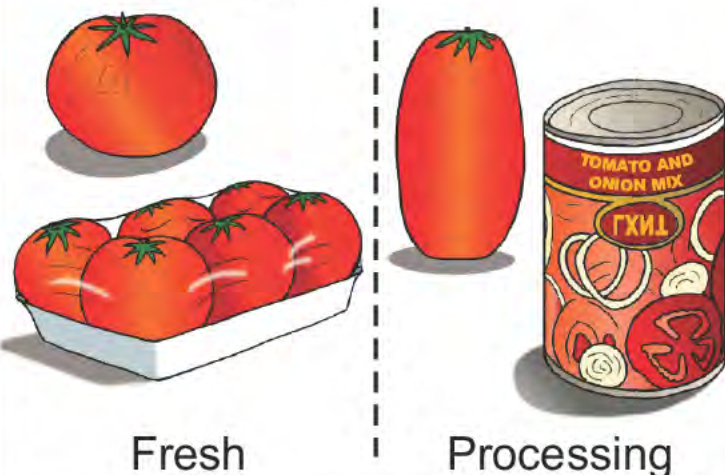
LET'S MAKE AGRICULTURE OUR CULTURE

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PLANNING



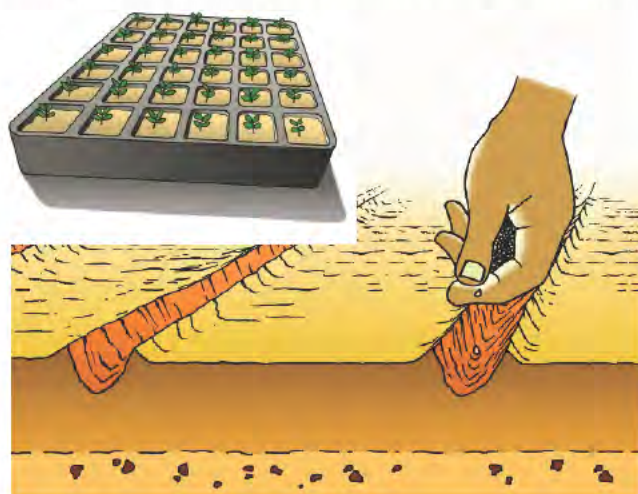
1. What type of tomatoes are you going to grow?



2. When will you plant the crop?

 WARM AREAS	AUG - JAN
 COOL AREAS	SEPT - DEC
 COLD AREAS	SEPT - NOV

3. Will you sow your own seed or buy seedlings from a nursery?



4. Will you use a trellis system?
How will you support the plants?



5. Which cultivars will you plant?
Check available varieties.
Examples of fresh tomato cultivars are:

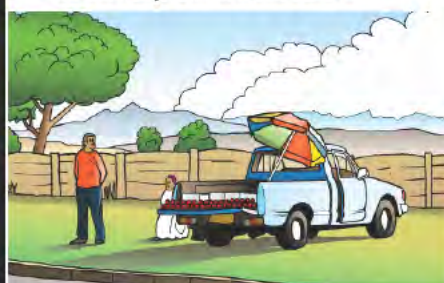
1. Rotam	Cheapest
2. Rodade	↓
3. Money maker	↓
4. Karino	↓
5. Floradade	↓
6. Magnum	↓
7. Heinz 1370	Most expensive

6. Who will you sell to?



Municipal markets

Farm stalls



Hawkers/
Roadside
vendors



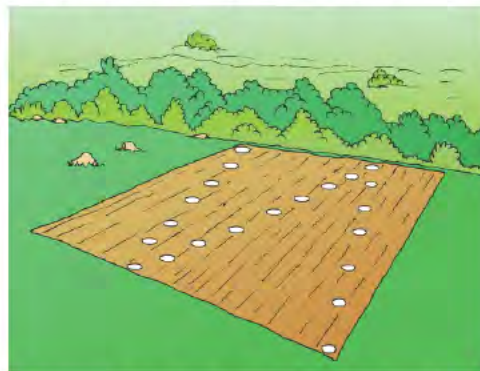
LAND PREPARATION



1. Measure contours if necessary to prevent erosion.



2. Take a soil sample consisting of ± 25 cores per field.



Send samples to Cedara to be analysed.

3. Disk in or cut down previous crop cover.



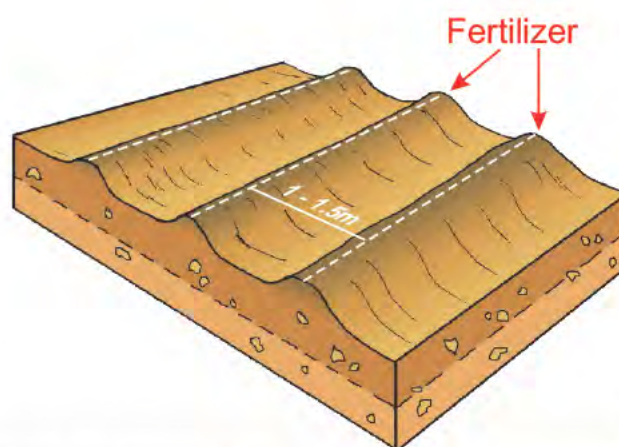
4. Buy lime, fertilizer and manure as recommended by soil sample results.



5. Broadcast lime and spread kraal manure one month before planting and incorporate into soil.



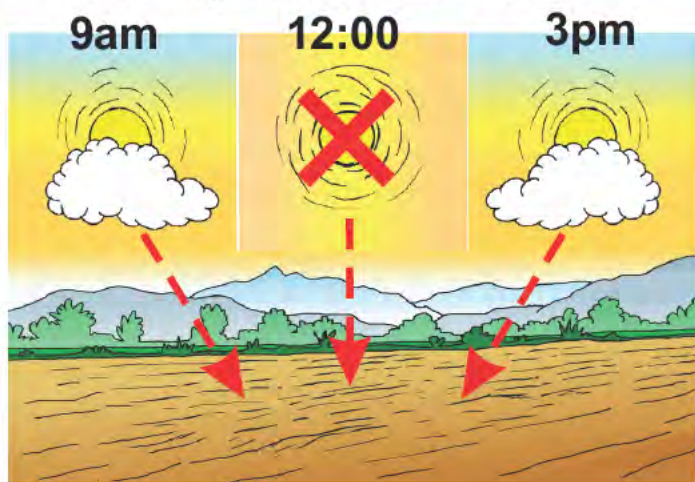
6. Form ridges of soil if land is sloped, and apply fertilizer 1-2 weeks before planting.



PLANTING



1. Transplant on a cool day, early morning or late afternoon.

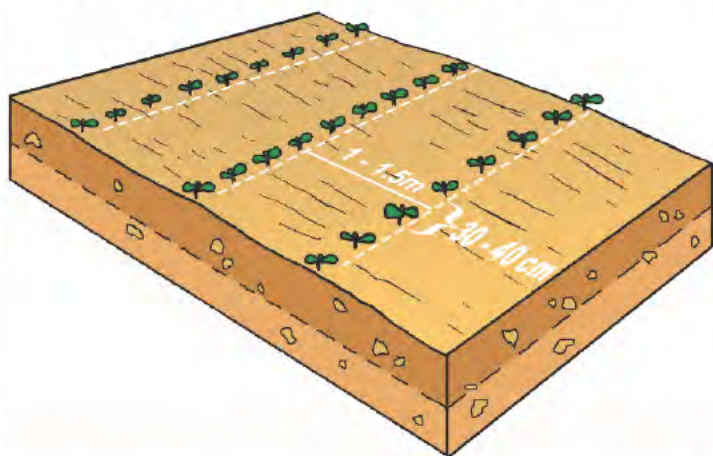


2. Transplant healthy, turgid plants with a well developed root system, and stem thickness of $\pm 8\text{mm}$.

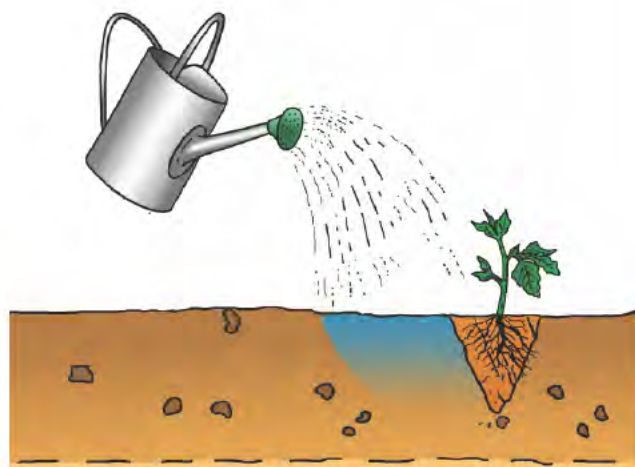


3. Plant Spacing

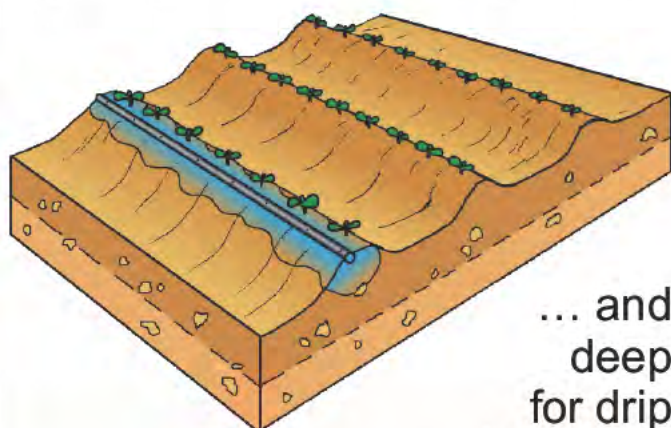
Between rows : 1 - 1,5 m
Between plants : 30 - 40 cm



4. Water the plants immediately after planting.



5. Make sure plant roots are deep enough to reach water.





... and deep for drip irrigation.

6. Mulch along rows with leaves, grass or straw.

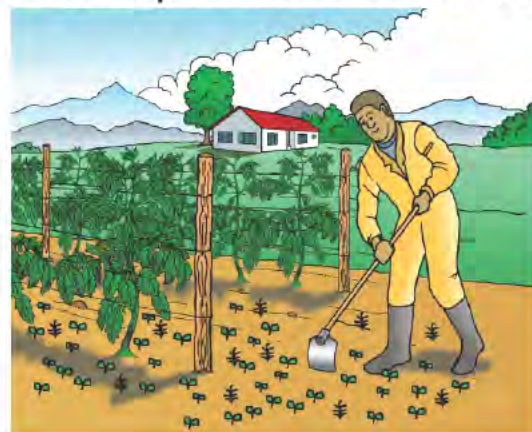


MULCH → Reduces WEEDS
Reduces WATER LOSS

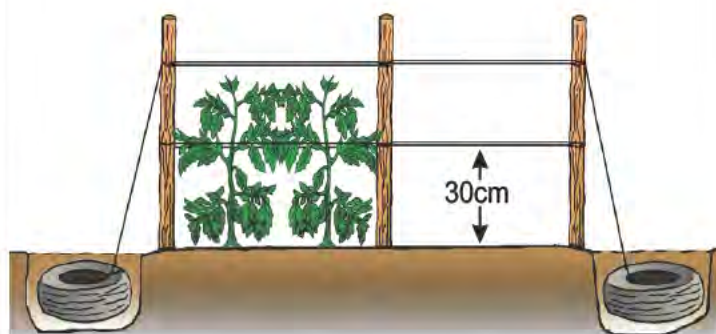
1. Irrigate plants often during first three weeks. Only twice a week after maturity.

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Young (Week 1-3)	1 litre 		1 litre 		1 litre 		1 litre 
Mature (Week 4 onwards)			3 litre 			3 litre 	

2. Weed regularly. Weeds compete for water, nutrients and light and increase pests and diseases.

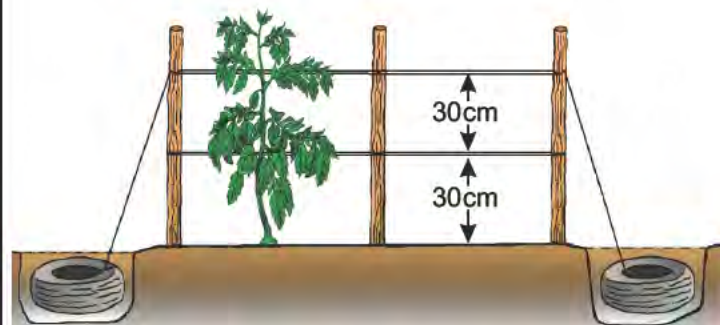


3. Actively growing tomato plants need support. This is known as trellising.



Anchor posts properly to prevent trellis from falling over.

4. Add an extra wire strand or baling twine as plants grow.



Tie side shoots with string.

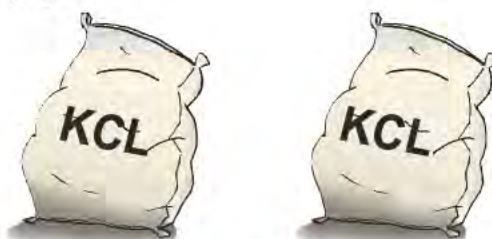
5. Topdress with LAN 3-4 and 6-8 weeks after planting.



3 bags per Hectare (15g/m²)
or 1X500ml oil tin per 34m²

Weeks	1	2	3	4	5	6	7	8
Application	X	X	✓		X		✓	

6. At 8-9 weeks after transplanting, apply KCL.



2 bags per Hectare (10g/m²)
or 1X500ml oil tin per 50m²

Weeks	1	2	3	4	5	6	7	8	9	10
Application	X	X	X	X		X	X	X	✓	X

1. Remove and burn or bury all disease and virus infected plants and fruit.



2. It is important to keep tools clean. Use Jik to wash cutting surfaces.



3. Check plants for pests and diseases every week.



Look on top **AND** under the leaves.

4. Chemical control:
Spray plants once a week for prevention of common diseases.

Week 1	Week 2
① Dithane	① Dithane
	MIX ② Copper Oxychloride
	① + ② MIX

5. Burn or bury remaining plant material after harvesting.



Rotate crops every 3-4 years.

6. Use a knapsack sprayer to apply chemicals to both sides of tomato leaves.

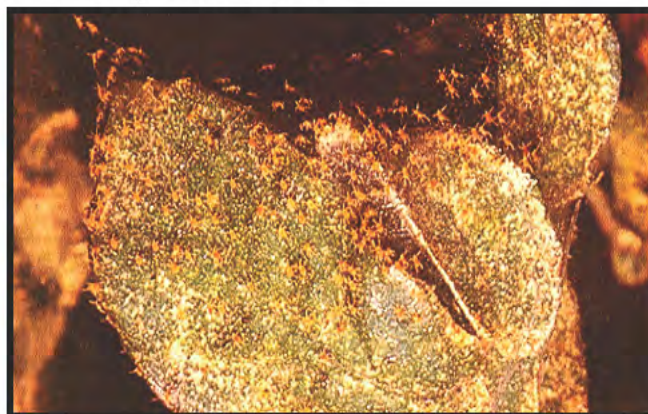


1. Aphids



Organic control: Neem, Insecticidal soap, Pyrethrum
Chemicals: Mercaptothion, Diazinon

2. Red spider mite



Chemicals: Diazinon, Dicofol, Bifenthrin

3. Leaf miner



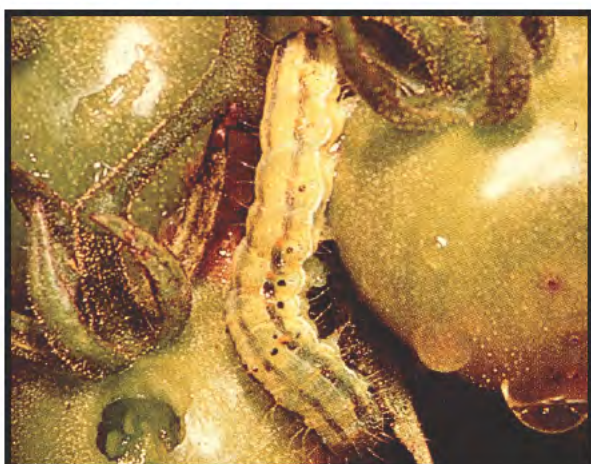
Chemicals: Bifenthrin

4. Cutworm



Chemicals: Cutworm bait

5. Bollworm



Organic control: Pyrethrum
Chemicals: Bifenthrin, Chlorpyrifos, Cypermethrin

6. Looper



Chemicals: Trichlorfon, Cyfluthrin

1. Early Blight

Favoured by warm weather & heavy dew (alternating wet & dry conditions). Symptoms on leaves increase when fruit develop. Infected leaves start dropping from bottom of the plant upwards. Common in sandy soils when plants are deficient in nutrients.

Control: Mancozeb, chlorothalonil, copper oxychloride.



2. Late Blight

Spreads very quickly and can defoliate a plant in one week. Spreads through air-borne spores. Disease favoured by cool nights and overcast/misty days.

Control: Captab, mancozeb, chlorothalonil.



3. Powdery Mildew

Severe leaf loss - causes sunburn to fruit. Favoured by warm days and cooler nights. Also occurs when it is hot and dry. Worse in sandy soils. Spreads through wind blown spores. Appears on older or middle leaves.

Control: Benomyl
Silicon strengthens cell walls making plant less susceptible to this disease.



4. Septoria Leaf Spot

Seen when early blight spray programme is not used. Symptoms on older leaves, close to the soil surface. Leaves drop, the bottom ones first.

Control: Same chemicals as for late and early blight.
Crop rotation.
Buy healthy seedlings



5. Fusarium Wilt

Worse in warm areas and in sandy soils. Soil borne disease. Also persists in tomato debris and on the seed. Yellowing symptoms usually on one side of the leaf and on one branch. Starts at the base of the plant on older leaflets: yellow leaves wilt, turn brown and dry, but do not fall off.

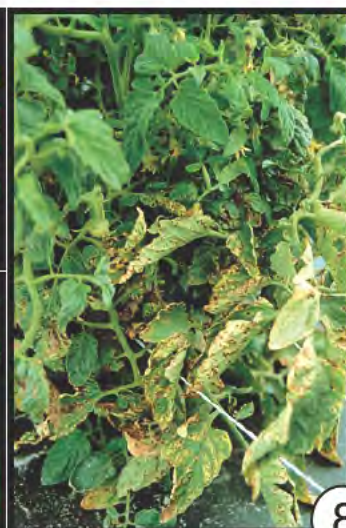
Control: Resistant cultivars.
Crop rotation



6. Bacterial Spot & Bacterial Speck

Seed-borne disease. Needs moisture to infect. Spreads by washing water. Wounds favour infection. Only attacks green fruit.

Control: Resistant cultivars.
Treat seed with hot water.
Copper oxychloride.



HARVESTING

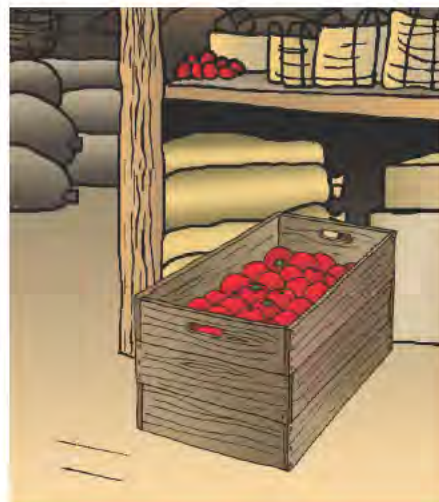


1. Harvest \pm 3 months after planting.
Pick light pink, softening fruit.



Harvesting will last for \pm 3 - 4 months if pests and diseases are controlled properly.

2. Place picked tomatoes in a crate and store in a cool place.



3. Separate the tomatoes into good quality, large ones and smaller or marked tomatoes.

Good quality

- High price

- Sell fresh



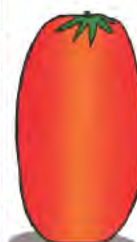
Lower quality

- Lower price

- Use for processing



4. Place tomatoes in punnets or packets. Processed tomatoes must be treated and canned.



5. Yields:

Up to 40 or 50 tonnes per hectare, depending on climate and management.

TONNES

Cool climate	10	20	30	40	
Warm climate	10	20	30	40	50

6. Sell your produce while it is still fresh. Sell to friends, markets and road stalls.



Save some money for your next crop.



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