

Tomatoes



If undelivered please return to the Mediae Company, P.O. Box 215- 00502, Karen

So you would like to grow tomatoes?



Leah

Leah decided to grow tomatoes. Tomatoes grow fast. You can harvest them 70-75 days after transplanting. They have a good market. Sell fresh tomatoes, or sell for processing to sauces, ketchup or pastes.

Before you start a business, find out if your soil is good for tomatoes, and which variety will grow best. Then you can look for a market and do a budget. This will tell you whether your business might work.

Do a Soil Test

Tomatoes grow well in an area of 760-1300 mm rainfall, but you can also irrigate. They like a day temperature of 20-25°C and night temperature of 15-17°C. The soil should be fertile and well-drained, with a pH of 5-7.

Ask **CropNuts** to come and do a soil test. They will take samples of your soil from your shamba to test. They will send you a report which will say:

- How healthy your soil is and if it has diseases or pests. Some diseases like Bacterial Wilt have no cure.
- Which fertilizers to add to make your soil better and how much to use.
- Which crops will grow well in your soil.

Follow the advice on your soil test results. You will save money on fertilizers and pesticides. You will get a bigger and better crop which will give you more harvest.

How do you find a market?

Find out the price of tomatoes. You also need to find a buyer. It is better to sell all of your tomatoes to 1 buyer.



PRODUCT

Is there a demand for tomatoes?

What are others producing?

What does the market expect?



PRICE

What price will you sell at?

Do some varieties make more money?

Can you make a profit?



PLACE

Where will you sell?

Visit local shops, schools, hotels and markets.

Talk to your neighbours.



PROMOTE

How will you advertize?

OLX?

Social media?

Posters and flyers?

Which variety should you plant?

Royal Seed sells different varieties of seed. They have been bred so they are not affected by some diseases. Choose your variety based on your soil test results, climate and what the market wants. Always plant certified seeds.

Certified seeds:

1. Grow fast and give high yields
2. Are resistant to some pests and diseases
3. Ensure that you get the variety you want.

Variety	Yields (tonnes per acre)	Matures in	Disease tolerance
Oxly	12-16	75 days	Leaf Roll Virus
Faulu	12-16	60-70 days	Fusarium Wilt, Verticillium Wilt
Rambo F1	30	75 days	Bacterial Wilt, Fusarium Wilt, Verticillium Wilt, Bacterial Spot, Nematodes
Sandokan F1	30	75 days	TSWV, Fusarium Wilt, Verticillium Wilt, Bacterial Spot, Nematodes
Onyx F1	18	70 days	
Strike F1	20	75 days	Fusarium Wilt, Verticillium Wilt

How do you do a budget?

A budget is a plan of the income and costs of your business. It is for a specific period of time or a production cycle or season.

1. Find out your costs. Think of all of the things you need to grow tomatoes. Think about seeds, fertilisers and water. Find out how much they cost.

2. Work out how much money you will make. Work out how long it will take for you to make money.

3. Work out your PROFIT:

income – costs = total profit

e.g. It costs 100,000/= to grow 1 acre of tomatoes. Each acre gives 200 bags of fruits. Each bag is sold for 1,200/=. This is a total income of 240,000/=. Therefore: **expected income of 240,000/= – production costs of 100,000/= = a profit of 140,000/=**

Item	Budget
Soil Test	2,500/=
Fertiliser	50,000/=
Seeds	25,000/=
Tools	5,000/=
Labour	50,000/=
Other costs	XXXXX/=

What is a rolling budget?

This is a budget that is updated on a regular basis. It covers the costs for each week or month. It allows you to change your budget as you go along. e.g.

Date	Details	Budget	Money out
Week 2: 1-7 Feb 2017	Fertiliser	4,500/=	4,400/=
	Labour	6,000/=	6,500/=
	Miscellaneous (any costs you did not expect)	5,000/=	2,800/=
	TOTAL	15,500/=	13,700/=
Week 3: 8-15 Feb 2017	Labour	2,500/=	2,500/=
	Miscellaneous	6,000/=	5,500/=

Sometimes prices change. You can change your budget as you go. If your actual expenses are **the same or less than** the budgeted expenses, you can meet your targets.

How will you water your crop?

Tomatoes need a lot of water to grow well. Sometimes the rains do not come or are not enough. Many tomato farmers irrigate their crop. Hosepipes and watering cans waste time, water and money.

The DLTP Farmers put in a drip irrigation system. They:



- Use less water as the water from the pipe goes directly to the plant roots.
- Water is not wasted on weeds.
- Plants do not get wet and have less fungal diseases.
- Once the drip lines are laid, you just have to turn on the tap when you want to water.

The DLTP farmers also decided to buy a **Futurepump** solar pump together. They saved a lot of money on electricity. The pump works by using energy from the sun. You can even charge your phone for mobile banking!

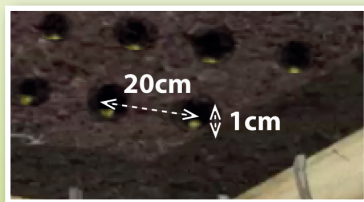
You can pay off the cost of the **Futurepump** after 3 seasons. After this, your pumping will be free!



Start your Nursery

Make raised nursery beds 1m wide, and 15cm above the ground. Mix well-rotted manure into the soil. Use 1 debe of manure for every square metre.

Sow the seeds in lines 20cm apart and 1cm deep. Cover lightly with soil and use dried grass as mulch.



Drench with 12g of **Control** in 20L of water to stop early pests and diseases.

When seedlings sprout, remove the mulch and put a shade over the bed.

Water the seedlings 2-3 times a week.



Transplant your Seedlings

Transplant your seedlings after 3-4 weeks, when the seedlings are 15-25cm tall and have 3-5 leaves. 1 week before moving them, give them less water.

Dig holes 15cm deep, 60cm apart in rows 60cm apart. In each hole, put a handful of manure and a bottle top of **Mavuno** Planting NPK 10:26:10. Mix well into the soil to stop the seedlings being burnt by the fertilizer.

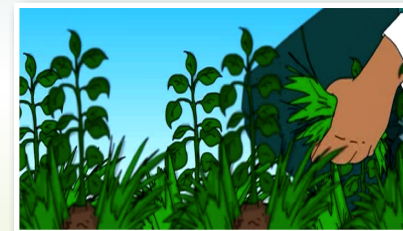
Plant early in the morning or late in the afternoon. Uproot a seedling with a ball of soil and plant in the hole.

Drench with 12g of **Control** in 20L of water. Water 2-3 times a week.

Managing your Crop

2 weeks after transplanting, replace seedlings that have died.

Weed every 3-4 weeks to keep away pests and diseases. Weeds take away water nutrients and space from your crop. Weed by hand or use a jembe.

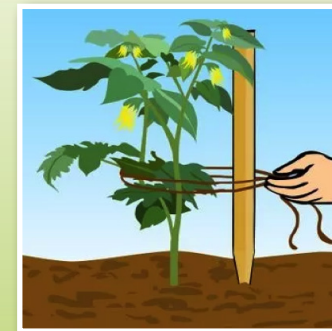


Topdress after 3 weeks. Make a shallow furrow 2-3 cm deep, 10-15cm from the plant's stem. Sprinkle 10g **Mavuno** Top-dress fertilizer NPK 26:0:0. Cover with soil. Before flowering, topdress with NPK 17:17:17.

Support your tomato plants. Tie the stems to a stake with string. You will get cleaner fruits and harvesting will be easier.



Prune your plants. Take off side shoots. Leave 2 shoots on each plant.

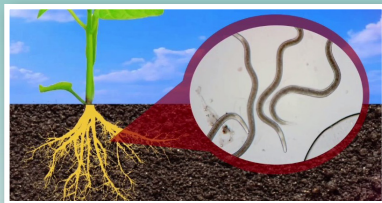


Feed your plants with foliar feeds. Mix 40g **Easy Gro** Flower & Fruit with 20L of water in a knapsack. Spray the plants every 2 weeks during flowering and fruiting.

Pests and Diseases

Nematodes

Nematodes are tiny worms that live in the soil. They feed on your tomato plants' roots and make them weak. A soil test will tell you if your soil has nematodes.



To kill nematodes, mix 100ml **Nimbecidine** and 100 ml **Bio Nematon** with 20L of water in a knapsack. Drench the soil. Repeat every 3 months.



White Fly



These are tiny white flies that suck sap from the leaves. Kill white fly with both **Nimbecidine** and **Final Flight**.

Mix 30ml **Nimbecidine** with 20L water in a knapsack. Spray the plants 15 days after planting. Repeat every 15-20 days.



Mix 4g **Final Flight** with 20L of water in a knapsack. Spray when you see white fly. Repeat every 10 days.



Leaf Miners



Leaf miners are insect larvae that live in and eat the leaves. They make white lines on the leaves.

Mix 10g **Cyro-Guard** with 20L of water in a knapsack. Spray the leaves when you see white lines.

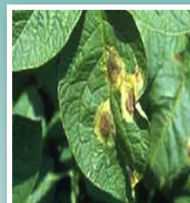


Blossom End Rot

This happens when your plants do not get enough calcium.



Mix 40g **Easygro** Calcium with 20L of water in a knapsack. Spray the plants every 2 weeks.



Blight

Blight is caused by a fungus. The leaves get spots and rot. Your crop is more likely to get blight during cold weather.

To treat, mix 30g **Mistress** in 20L of water in a knapsack. Spray the plants.

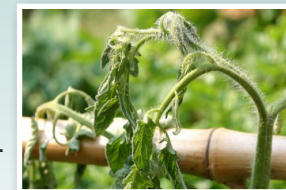


Bacterial Wilt and Fusarium Wilt

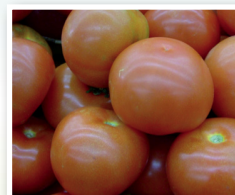
Bacterial Wilt (cause by bacteria) and Fusarium Wilt (caused by a fungus) have no cure. Dig out sick plants with a clump of soil, then burn them away from your healthy crop.

Prevent Bacterial Wilt by:

- Planting only certified seeds tolerant to Bacterial and Fusarium Wilt
- Practising crop rotation and use only clean farming tools.



Harvest your Tomato Crop



Start to harvest 3-4 months after transplanting.

Pick the fruits. Sort them into clean plastic or wooden crates ready to sell or process.

In one season, you should be able to harvest 12-15 kg of tomatoes per plant.

Why keep records?

Keeping records of your crop helps you to manage your business better. Each day, write down anything important that happened that day. If there was a problem, record what you did about it.

Date	Details	Action
21/02/17	Saw white lines on the leaves – leaf miners?	Sprayed with Cyro-Guard
23/02/17	Heavy rain today	Postpone irrigation for 3 days
25/02/17	Saw some weeds	Removed and burnt weeds.

What next?

Look back at your budget.

Have you made money from your first crop of tomatoes?

What mistakes did you make? What have you learnt?



For more information on Tomatoes

To get a soil test, call **Daktari Wa Udongo** on +254 790 49919 or send an email to **CropNuts** on support@croppnuts.com to find out the closest field agent in your area.

Contact **Osho Chemicals** on 0711 045000 or email marketing@oshochem.com or SMS 20560.

Contact **Royal Seed** on 0734 257635 or email customerservice@khs.co.ke

Contact **Futurepump** on 0796 514409 or email DLTP@futurepump.com

Use our budgeting tool, **Budget Mkononi** on our website www.dontlosetheplot.tv and learn the costs of growing tomatoes and how much profit you can make.



Sign up to our mobile service iShamba for expert advice on growing tomatoes. Simply SMS the word 'VIJANA' to 21606.

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