

Deciding what to plant

Bible Reference Matthew 18:20-22

Memory Verse “For where two or more come together in my name, there am I with them”.

This tells us Jesus is with us when we carry out his work together and when we live as he would live.

When choosing what to plant, it is important to consider where it is going to be planted and whether there is sufficient light, shade and soil conditions for the plants. Some plants grow well in containers, key-hole gardens and tower gardens and others are better in a larger area. It is important that when the seeds are planted they are thinned out to allow plants to mature. The seedlings can be passed to a neighbour and exchanged for some other variety that they have planted and thinned. When planting the soil needs to be damp and then each seed or seedling is placed and patted down gently.

The following plants will grow well in a tower, keyhole or container garden:

Lettuce - *Lettuce is one of the oldest leafy vegetables known to man. It is believed that Lettuce originated from India and central Asia. Lettuce is the starting point for every good salad, a basic in sandwiches, and a decorative underlayment for many other foods. Lettuce is nutritious, yet low in calories.*

It tolerates a wide range of soil, and needs plentiful moisture.. Seeds take 7-17 days to emerge in to seedlings. Lettuce seeds are very fine and should preferably be planted in rows. Sow seeds directly into holes 1-2 cm or 1 inch deep. A spacing of 1 inch apart between plants and 12-18 inches apart between rows should be used. Seeds can also be lightly broadcasted especially for loose leaf varieties in a patch instead of a row. Lettuce is shallow rooted so keep soil moist to support continuous growth and weed by hand.

Lettuce can be harvested anytime after the true leaves form. For best quality pick early lettuce than the late, as lettuce allowed to grow too long may be bitter and tough. To harvest cut the crop right at the soil line when mature if you prefer to harvest full heads. However you can also harvest only the outer leaves to keep the plant in production longer. Try to harvest in the morning when the leaves are crisp, sweet, and full of moisture.

Spinach – *Spinach is easy to grow, and nutritious. This cool-season crop is among the first greens ready to harvest, as its quick to turn bitter and grow into seeds. The super-cold-hardy vegetable is a tender crop, with a dark green color and a handsome texture. In only 5-9 days its seeds germinate, with only 6-8 weeks to give you a ready plant to harvest.*

Spinach is propagated by seed, and this should be under mild and cool temperatures, probably during early wet season. Seeds take 5-9 days to germinate.

Spinach grows best in well drained, fertile soils, high in organic matter, and plentiful and consistent moisture. Nitrogen rich soils always give the best results. Spinach tolerates

slightly alkaline soils but it's sensitive to acidic soils. It forms deep tap root, so for best growth, loosen the soil at least 1 foot deep before planting.

Prepare soil with aged manure about a week before planting. Plant your spinach seeds directly into the field. Open up shallow trenches on the ground about 1 cm deep. Thinly spread seeds, to ensure plenty of spinach growth. Sowing should be at a rate of 12 seeds over a wide row or bed. Thin seedlings when they are about 1 inch tall. Space each plant about 2-4 inches apart, and in a row 2 inches apart. Then cover lightly with soil. Water the

After 6-8 weeks, start harvesting your spinach from any plant that has at least 30cm long leaves. Carefully cut the outside leaves to extend plant productivity, or you can harvest the entire crop by cutting through the main plant.

Green Onions – Also known as salad onion, spring onion is another sweet vegetable of the onion family. The plant gives long, slender green tops and the small white bulbs which are edible.

Varieties include: White Lisbon - it's an early maturing variety and is more tolerable to dry conditions; Pompeii - it's the succulent type with a stiff rounded stock; Apache - this is the red variety of spring onions and has a crisp texture.

The herbaceous vegetable thrives best on well-draining, humus-rich soils, with a soil Ph range of 6-7. Lime can be added if the soil is too acidic or sulphur compounds when it's too alkaline.

Spring onions can be sown directly to where they are to be grown prepare the ground in advance to create a fine tilth, you can do this by digging and then rake. The seeds shall be able to emerge in about 7 to 10 days

Make holes of about 1.5 - 2 cm deep, and 15 cm apart as the seeds are too small and cannot afford deeper sowing. After thinly sow your seeds.

Alternatively you can sow into containers by just adding a mixture of compost and soil to a bucket with draining holes. You will lightly scatter the seeds over the surface and then cover with the soil mixture.

All the steps above should be followed with watering to facilitate seed germination, keep the soils moist but never water logged and try to keep the plants weed free.

Watch out for small sucking insects like thrips.

new plants to facilitate germination. To yield fresh spinach all season long, sow other seeds after every 2-3 weeks of sowing.

Spring onions will take about 8-12 weeks to mature. To harvest use a sharp knife to cut the spring onion just above the roots leaving about 3 cm stem in the ground. After harvesting the first leaves water the root stalk to support regrowth.

However if the harvest is meant for the farmer markets it will require you uprooting the whole plant to keep it tight together.

Fertilize only if it's necessary. Keep soil moist by mulching.

Carrots - Carrots are biennial vegetables, as they use leaves in their first year to gather energy from sun to build a big, starchy root. They come in shapes and colors other than the long orange look. They also have other shades like red, yellow and purple. If you're thinking vitamin A grab a carrot; Vitamin A is very good for your Eyes.

Varieties in Uganda include:

Nantes carrots –grow fast and are easy to grow, can adopt to a range of climates and soils.

Chantenay carrots-develop stocky roots that become sweeter as the soil cools.

Miniature carrots – have small, shallow roots that are often quite sweet. They are good for heavy clay soil.

Imperator carrots –are long and need deep, sandy soil to thrive.

Danvers carrots-have sturdy roots and store well.

Carrots seeds do not sprout fast, so they can take about 1-3 weeks to form viable sprouts. Sowing them with a nursing crop like the fast growing radishes would shelter the tiny carrot seedlings while helping to suppress weeds.

Just like all root crops, carrots do prefer friable soils to ease their penetration downwards. The soils should be well drained, and enriched with nutrients for proper root growth.

Sow the seeds thinly on a sunny, dry day in shallow drills around 2-3 cm deep. If you have trouble sowing thinly, try mixing the seeds with a handful of sharp sand and then saw the seeds together with sand. Carrot seeds are small, but it's wise to plant them as thinly as possible, as this reduces the amount of thinning necessary and a potential risk of pest which can build up. After sowing; cover the seeds with soil and then gently firm the surface. Keep the soil moist for at least the first consecutive 10 days after sowing, because carrots take longer to germinate than other vegetables. Once the seeds have germinated and are showing their first true leaves, thin the seedlings to 5cm or 2 inches between plants.

Before pulling out your carrots, use a fork to loosen the soil just outside the row. Then pull sown carrots when roots reach mature size and show rich colour. Taste improves as carrots mature however do not leave mature carrots in warm soil any longer than necessary. Store only best, undamaged roots. Cut off their foliage and lay the roots between layers of sand in a strong box. Remove any odd rotten roots before they infect their neighbours.

Quick Tips for growing carrot Vegetables in Uganda

- Double dig your planting area or build up a raised seed bed
- Rake the soil free of lumps and stones
- One week before sowing, rake in a light dressing of general fertilizers
- Open up a trench or drills 2-3 cm deep
- Thinly sprinkle carrot seeds mixed with sand
- Then cover seeds soil once in place
- Water the soil as too little water results into coarse woody roots
- Harvest the carrots when they are due

Radishes – Radishes are easy to grow in any size of garden. They are fast-growing and are ready to harvest in about four weeks from sowing. Sow radish seeds every two weeks in fertile, moisture-retentive soil, throughout summer for crunchy salads. Don't forget, there are varieties for winter too, such as mooli.

Radishes should be sown little and often, and make sure they grow well without any checks to their growth.

Summer cultivars are sown from March to mid-August; or for an early crop sow in February, in pre-warmed soil and protect with cloches. Sow seed in the spot where it is to grow. This can be in the ground, in containers or sow a couple of rows in a growbag. Sow seed thinly 1cm (½in) deep, and try to aim for one seed every 2.5cm (1in).

Winter cultivars are sown in July or August. Sow 23cm (9in) apart for winter varieties; this will then minimise the need for thinning later on. If sowing more than one row, space rows 15cm (6in) apart.

Grow

By sowing seed thinly (approximately 2.5cm/1in apart) there should be no need for thinning summer cultivars, but any that is needed should be done as soon as possible. Winter cultivars should be thinned to 15cm (6in) apart.

Keep the soil moist to ensure rapid growth, keep the roots fleshy and tasty and prevent splitting. Sowings made in July and August can be a problem due to the hotter, drier conditions, so make sure these are well looked after.

Because radishes are quick to mature they can be used as a 'catch crop' being sown between rows of slower-growing vegetables such as peas and potatoes. They can even be used as row markers of slow-germinating crops, such as parsnip and onion - the radishes germinate quickly, marking out the row where the other crops have been sown and can be pulled before interfering with the main crop.

Common problems



Flea beetle: Leaves are covered in small holes and damaged areas turn brown. Seedlings are particularly susceptible.

Remedy: Grow plants under horticultural fleece and keep the soil moist. Water in nitrogen-rich fertiliser to help the crop outgrow the pest.



Slugs and snails: These feed on the young seedlings and you'll see the tell tale slime trail on the soil around your crop, as well as on the leaves.

Remedy: There are many ways to control slugs and snails, including beer traps, sawdust or eggshell barriers, copper tape and biocontrols.



Brassica downy mildew: This is a common disease of brassicas, as they are not in the ground so long. The leaves will turn yellow, with white, fuzzy patches on the undersides. The root may also turn brown.

Remedy: Remove infected plants as soon as you see them. Don't plant brassicas in the same place as previous brassica crops.

Harvesting Radishes

Radishes need to be grown steadily and harvested young to ensure they remain succulent, otherwise they can become woody and inedible.

Pull summer radishes as required, making sure they are never left to mature and become woody. Winter cultivars can be left in the ground and dug up as required, or lifted in November and stored.

Arrugula – Is a relation to Kale. Commonly known as rocket. It has a slight peppery taste. Plant as per kale.

Kale – Sukuma wiki (kale) does well in temperatures of 17-22 Celsius and rainfall of 350-500mm. Soils with high organic matter and a pH of 5.5 - 7.0 are ideal.

Parsley – Propagating cilantro is by seed, and given optimal conditions seeds are able to germinate and grow to maturity within about 2 to 3 weeks. Cilantro has no special soil requirement. Rich, dark soil always produces the biggest, healthiest plants. But any moisture retentive soil with average nutrient levels can be fine. Cilantro/parsley also prefers soil pH of 6.0 to 6.7.

When planting Parsley sow seeds about ¼ inch (0.6cm) deep with spacing of 6 to 8 inches apart, and in rows at approximately 1 foot (0.3m) apart. Water the seeds as cilantro seeds need plenty of moisture to germinate.

Cilantro grows so quickly, so you need to practice succession planting. Therefore do this every 2 to 3 weeks. This way you will ensure that you have a fresh supply of cilantro through the growing season. Once the seedling are about (5.1cm) in height, you can apply water soluble nitrogen fertilizer.

When the plant is established aim at keeping the soil moist other than being soggy, as cilantro is a dry climate herb. Harvest cilantro by cutting off individual leaves, with stems from the base of the plant near the ground level. To store cilantro leaves, you can either freeze or dry them. To freeze, put the leaves in a re-sealable freezer bag and store them in your freezer. To dry them, hang the plant in a warm place until fully dried, and then store the leaves in a re-sealable bag or container.

Alternatively, you can just snip cilantro leaves for fresh use as the plant attains the height of 6 inches.

Chives – as per green onions

Nasturtiums – Seeds can be soaked overnight to speed up germination or keep moist so the seeds germinate. Once established, they do not require much water. Perfect for those with water restrictions or limited rainfall. They can take drought and heat although can suffer sunburn and heat stress in extremely hot weather. If you live in a climate where you get scorching summers, try planting in a pot and moving to a more protected spot or plant where they will get a bit of protective shade. Encourage more flowers to grow and a more compact shape by pinching out the runners from time to time.

Nasturtiums tend not to tolerate frost. From my observations, they don't like strong winds either. If they get a bit ratty looking, just prune them back and use the leaves and vines as mulch. They will quickly reshoot new growth!

Grow very well in poor, dry soils so plant nasturtiums where other flowers and vegetables would be unsuccessful.

Grow in sun or semi-shade – do well in both. However, in the full heat of summer, nasturtiums can suffer heat stress. Adding shade protection or moving pots to a filtered light position will keep them happy.

Can be trained to grow vertically or cascade down from hanging baskets and other containers depending on the cultivar.

Tomatoes (better in their own containers as will steal the nutrients and water from other plants) - ***The tomato is infact a fruit because it's seeds are inside the flesh.***

The choice of a Tomato cultivar is based on fruit quality, adaptability and reliability, susceptibility to diseases and pests.

Varieties include - Money maker, Bonny Best, Marglobe ,Rio Grande ,Tengeru 97, Amateur Rodade, Heinz, New fortune maker F1.

Tomatoes give good results when grown in well managed sandy loams and heavy clay loam free of hard pan. Best results are obtained in deep, well drained loams. The soil should be rich in organic matter and plant nutrients, with a pH value of 6 to 7.

Tomatoes are best brought up using seeds.

Make a square portion of a raised site meant for a bed, and then make a fine tilth. Incorporate in manure or potting agents like biocha to enhance the nutrients. Broadcast the seeds on the bed and lightly cover with soil. Seedlings are usually ready for transplanting 3-4 weeks after sowing, and they must be transplanted on moist soil. Seed beds should be irrigated after sowing and it should be done regularly until seedlings reach a height of 5 to 7 cm.

Tomatoes are heavy feeders of plant nutrients including nitrogen, phosphorus and potassium. The plant responds well to organic fertilizers too.

Weed control; these can be controlled chemically or mechanically. The Chemical commonly used to control weeds is “weed master”, alternatively hand hoes can be used to shallowly plough off the weeds.

Pruning; this practice influences the flowering and fruiting of tomato plants. Prune plants by pinching off lateral branches as they appear in the leaf axils.

Mulching; Mulch newly planted tomato plants with row cover or dry grass to promote faster growth and also maintain soil moisture.

Latticework; this is the same as trellising or building plant supports, the practice has a number of benefits like improved spraying to help control foliar diseases and pests, less the sun burn.

The practice will also help promote air circulation around the plant.

Look out for pests and diseases like nematodes, rust mite, cutworm and aphids. General control measure to manage these is through crop rotation, proper field sanitation and use of approved chemicals for chemical control. Tomato harvesting is mainly done by hand. The activity is dependant to the end use of the produce and distance to the market.

Pick fruits meant for transportation to long distances when they are at a less mature stage, and those meant for the local market at a mature ripe stage. Tomatoes can be marketed at the fruit and vegetable markets like Nakaseero, Kalerwe, hotels, restaurants, and local roads side stall.

Quick Tips for growing Tomatoes in Africa

- Open up land meant for setting the beds by digging.
- Make square raised beds by heaping up the soil.
- Gather dry grass and lay it on top of the beds, then light them up to start burning.
- The burning is aimed at killing the soil pests, so leave the bed to cool a little bit.
- Make furrows for sowing or thinly broad cast the tomato seeds.
- Cover the sown seeds thinly with a layer of soil.
- Then water, this should be regularly thoroughly the bed time.
- At 3 to 4 weeks transplant the tomatoes to the main field,
- Be sure to spray fungicide and pesticide as you transfer your seedlings.
- Harvest your tomato berries when they are due.

Egg plants - are short lived perennial vegetables which are native to Asia. They are mainly found in the tropical and sub-tropical regions as they require about 100-140 warm days with temperatures between (70-90) °F to reach harvest.

Egg plant varieties differ in size, shape, color, growth and maturity time, i.e. oval to oblong egg plants- these are large, oval shaped and purplish black. They produce best in warm climate. Japanese egg plant –it matures faster than the oval egg plant producing numerous long slender fruits. Small fruited egg plants - are the best type for compact spaces. They produce fruits in attractive clusters which may be green, white, lavender or purple. Novelty egg plants - these include unusual varieties from around the world like the orange Turkish eggplant, green Thai egg plant or egg shaped white egg plants.

Egg plants do well in fertile, well drained, and slightly acidic soils. They should be high in organic matter for best growth and yield. Could be any type of soil as egg plants tolerate a broad range of soils and also has moderate moisture needs.

Egg plants are propagated by seed. It takes about 7-10 days for the seedlings to emerge. These are hardened off carefully before transplanting by reducing temperature and water.

How to Plant Egg plants in Africa

Set transplants at 18-24 inches apart in rows 30-36 inches apart. Use row covers to protect plants with heavy fruit set. Fertilize egg plants as they are heavy feeders, but avoid high nitrogen fertilizers. These may encourage lush foliage growth at the expense of fruiting.

To help reduce diseases, don't plant egg plants or other tomato family crops in the same location more than once every 3-4 years. The major pests to look out for are aphids' and cut worm, and the most important disease you will face is verticilium wilt.

Harvest your Egg plants 16-24 weeks after sowing when the skin of the fruit is shinny and un wrinkled. Cut the fruit close to the stem, but leaving about an inch of it attached. Egg plant can be stored for up to 2 weeks in humid conditions not lower than 50°F.

Planting the Key-hole Garden

Remove any weeds that have gathered in the garden. Give it a water and place some compost into the centre of the garden or around depending on which garden structure has been adopted. Using string, divide the area up into the appropriate number of sections for planting in order to clearly mark out each section for a different plant. Label each area or draw a planting plan for later reference. Plant seeds at depth and distance recommended for each type of plant. The kitchen garden is suitable for seeds or seedlings (it can also be used as a nursery bed for transplanting plants into a larger field area).

Note: potatoes and carrots grow well in containers.