Simlaw Seeds®

Superior & Reliable

CABBAGE PLANTING GUIDE 2020

SIMLAW SEEDS COMPANY LIMITED
P.O.Box 40042-00100
NAIROBI.
CALL: 0722 200545/0734811861
WHATSAPP: 0794 546935
EMAIL:INFO@SIMLAW.CO.KE

PREFACE

Simlaw seeds Company ltd, a subsidiary of Kenya seed company, was founded in 1929 making it one of the oldest seed companies in East Africa region and renowned for supplying 'superior and reliable seeds' to farmers. Over the years of operation, Simlaw seeds has managed to maintain it's position as a leader by closely collaborating with it's partners across the world, being in constant touch with all its stake holders and most importantly, investing in research and development.

It is our pleasure to be associated with the farming success in the East Africa region in line with our vision and mission of availing superior and affordable certified horticultural seeds and other inputs to improve agricultural productivity and livelihood of stakeholders. Key amongest the stakeholders is ' the farmer.'

This planting guide provides a summary of our cabbage varieties available from Simlaw Seeds co. and it's outlets.

INTRODUCTION

Cabbage belong to Brassicaceae (Cruciferae) family which includes crops such as Kale, Cauliflower,Broccoli and Radish. It is divided into three main types: Green, Red and Savoy, and is one of the most widely grown, popular and nutritious vegetables in Kenya mainly for the domestic market. It can be grown by both small and medium scale farmers. Nutritionally it is rich in Calcium, Iron, Vitamin A, C & E, Minerals, Riboflavin, Nicotinamine and Ascorbic Acid. It also act as cleansing agents for stomach and intestinal tract if consumed raw without salt due to high sulphur and chlorine content.

While farming it is important to plant hybrid cabbages since they have a high rate of germination and conversion into cabbage heads, good tolerance to diseases and in some cases pests, high yields since one head can weigh up to 5 kg, good field holding and uniform maturity.

CLIMATE

Cabbage will tolerate a wide range of environmental conditions but thrives in cooler temperatures. It can tolerate hard frosts, but severe freezing can be damaging. Its flavor improves with cooler temperatures because plant cells are working to convert starches to sugars to protect the plant against the cold.

It is advised that the planting dates be well planned so that harvest dates occur in cool weather. Cabbage is most heat tolerant but prolonged high temperature causes puffy heads with long cores and increased tip burn.

SOIL TIP: Crop rotation is especially important with cabbage and other members of the brassicaceae family. like the kale, radish, turnips and broccoli.

VARIETIES

In Simlaw Seeds we have a wide variety of cabbages, both hybrid and Open Pollinated Variety, that can best suit the different climatic conditions in the region.

Chairman F1:
This is a medium - late maturing variety ready for harvesting 85-90 days after transplanting.

Characteristics

- firm- very firm and green color head.
- Tolerant to Black Rot.
- Plant population: 11,111 per acre.
- Average head weight 4-5 kg.
- Yield: 30 tonnes-50 tonnes per acre.

Riana F1:
This variety has both heat and cold tolerant, blue green, white internal color.

Characteristics:

- Resistant to splitting when irrigated or rain fed.
- Maturity: It takes 90 - 100 days after transplanting.
- Has Round and compact head, weighing 4-5 kg.
- Tolerant to Black Rot.
- Yield 15 tonnes - 30 tonnes per acre.

Gloria F1:
It is an early-medium maturing variety ready for harvesting 75-85 days after transplanting.The head is firm to very firm and compact blue green color head. It does not to splitting and has along shelf life.

Characteristics:

- Tolerant to Black Rot.
- Plant Spacing: 60 cm x 60 cm
- Maturity: 90 days after transplanting.
- Plant population: 11,111 per acre
- Average head weight 4-5 kg.
- Yield: 30 tonnes-50 tonnes per acre

Pruktor F1:
It is a medium to late maturing variety and can be ready for harvest 85-90 days after transplanting. the head is firm to very firm and compact.

Characteristics:

- Tolerant to black rot and ring spot.
- Blue green color.
- Head size is 4-5kg
- Shape is high round

TRANSPLANTING

Appropriate stage for transplanting is 4-5 weeks after seed sowing, precisely when the plant has is 4-6 true leaves. It is recommended that transplanting should be done late in the evening. Recommended Spacing is 60 cm-72 cm, is 60 cm between rows and 45 - 60 cm between plants. Averagely the variety this will give a plant population of 11,000 - 14,800 plants/acre. It is important to ensure proper settling of soil around the roots and watering well. For moisture, cabbages require above average water and lack of this results in slow growth and poor performance.

*Splitting of cabbage may happen when there is sudden supply of water after a dry spell.

FERTILIZER APPLICATION RATES

- During planting apply 500g of manure per planting hole (8 tons/acre) and 2 table spoons (10 g) of DAP per planting hole (80 kg/acre).

*Only use well decomposed manure to avoid possible introduction of cutworms in the field

- Mix DAP fertilizer thoroughly with the soil to avoid possible scorching of the seedlings.

Top dressing:

- This is done with CAN fertilizer in 2 splits to avoid nutrient loss through leaching as well as excessive soil salinity
- The first split is applied at a rate of 10 g/plant (100 kg/acre) 2 - 3 weeks after transplanting
- The second split is applied at a rate of 20 g/plant (200 kg/acre) at the onset of head formation.
- Use placement method as it is more effective and economical.

WATERING

The Cabbage requires optimal amount of rainfall 500 mm during the growing period.

• Regular watering should be maintained to ensures uniform head formation, prevent head splitting and increase the size of the head

• Watering should be reduced as crop matures.

• Excessive irrigation increases water logging hence deficiencies of Magnesium and Phosphorus.

***Irrigation can be overhead, drip or furrow**

PHYSIOLOGICAL DISORDERS

- **Internal burn tip**: tip burn is caused by inadequate supply of calcium. maintenance of a uniform soil moisture content is done to prevent moisture stresses. Tip burn causes the tip to become necrotic. Spraying of the calcium does not necessarily relieve the symptoms. Calcium normally requires root pressure to move into the leaves, especially the inner leaves.
- **Black petiole:** is caused by high phosphorous levels and corresponding low potassium levels.
- **Bolting:** this is characterized by formation of flowers pre-maturely. it happens when the early planted crop is subjected to ten or more continuous days of temperatures between 4 degrees and 10 degrees.
- **Head shape:** Low temperatures bring about flat heads, high temperatures cause a conical shape.

PESTS

CUTWORMS: They are grayish black larvae that partially or completely bite the stem at ground level causing the plant to fall over. They are found camouflaging in the soil near the cut seedlings

Control:

- Hand removal since the pest is easily found near the damaged plant, especially at the beginning of infestation
- Ploughing exposes the pest to its predators and desiccation
- Use of appropriate insecticides, such as - Beauvoir bassiana/ biological insecticides .

(Drenching should be done in the evenings)

SLUGS: a small animal with a soft, smooth and slimy body without a shell that slowly moves using one muscular foot. In cabbages they are mostly found under the leaves and its damage can reduces and quality and therefore marketability.

Control

- Cultural control is done by drowning the slugs in water tin buried in the ground and filled with water yeast is added to attract the slugs.
- Use slug pellets.

APHIDS: soft-bodied insects that use their piercing sucking mouthparts to feed on plant sap.

Damage:

- Cabbage aphids can harbor and transmit viruses. When the temperature is cold, cabbage aphids hide tiny black eggs in plant debris, cabbage stumps, or other hiding places.Eggs or resting adults can be present in woody old stalks, which is a good reason to pull up plants you don't need, and cut them into pieces before composting them.
- Infected crop have curled and distorted leaves which in turn lead to poor head formation.

Control: Field hygiene is the best practice which entails removal and destruction of crop residue.

Natural enemies (Parasitic Wasps) can also be used.

• Use of Biopesticide.

• Use of insecticides.

DISEASES

BLACK ROT

Description;This is a seed-borne bacterial disease, spread through soil and infected debris.

- Black rot attack and it spread is highly favored by high moisture conditions and high temperatures (26 - 30 0C).
- Spacing plays a great since crowded role plants provide conditions that are ideal for bacterial spread to nearby plants.

Symptoms;

- Yellow V-shaped lesions on the leaf margins which later turn brown as the leaf veins in the affected area become black.
- A cross sectional cut of infected stem reveal a characteristic black ring.
- In later stages, affected heads turn black and soft.
- The rotten heads give a characteristic offensive adour.

Control;

- Use certified seeds
- Maximize on field sanitation (burn crop residues)
- Use of resistant/tolerant varieties, e.g.) Karen F1, Sunny F1 Gloria F1 and chairman F1
- Rotate cabbage with legumes and cereals. (at least 3 years)
- Use of copper based fungicides (should be sprayed at early Stage of disease infestation)

BLACK LEG (DRY ROT CANKER):

Descriptions: This is a seed borne fungal disease, Spread through movement of infected seedlings, garden tools and crop debris.

It is destructive in wet soil Symptoms and leaves have light brown spots which may be circular and which later develop ash grey centers with many black spots. Stem has dark cankers below the soil level that kills the roots. Destroys the fibrous root system. Affected plants wilt abruptly and die or topple over as heads enlarge

Control:

- Use of certified seed
- Field sanitation (hygiene)
- Crop rotation for 1-2 years
- Good drainage
- Diseased plant parts should not be fed to animals if manure is to be used on fields
- Ploughing
- Application of Iprodione (spray on the base of the plants. Do not apply more than twice)

RING SPOT

Descriptions: This is a seed borne fungal disease
It is mainly spread by wind.
Also compost made from infected crop residues can act as transport media for the disease.

Symptoms: Cabbage infected has circular brown grey spots on the leaves which are often surrounded by a green margin and with black - specked zones

Control:

- Use of certified seeds such as Crop rotation for at least 2 years
- Use of fungicides
- Maintain field hygiene

ALTERNARIA LEAF SPOT

Descriptions: This fungal disease can severely damage cabbage if not controlled.

Symptoms:

- The effect of disease is spread in the all stages of cabbage growth from vegetative to storage.
- At first it start as a small, circular dark spots on older leaf surfaces
- As the spots enlarge, centered rings develop within lesions surrounded by a yellow halo
- Later on lesions eventually fall out, producing a hole.
- Under wet conditions, spots are covered by masses of black spores.
- In storage, spots enlarge and soft rot bacteria may enter lesions

Control:

- Use disease free transplants
- Remove all plant debris and destroy them after the season.
- Use crop rotation

BACTERIAL SOFT ROT

Descriptions:

- It is a soil borne disease
- •bacterial soft rot development is highly favoured by high temperature (32 - 33 0C).
- It is mostly spread by rain splash and also overhead irrigation on lower leaves.
- It mainly infest at post-harvest stage.

Symptoms:

- The infected cabbage head becomes soft and has watery rot which develops an offensive smell
- When the stem of the affected plant is cut, a very odor smell is generated.

Control:

- Maintain field hygiene
- Crop rotation cabbage with legumes, cereals
- Avoid harvesting when it is wet.
- Remove from the field or plough crops deeply immediately after harvesting so that the residues decompose as quickly as possible.
- Handle produces carefully and store in a cool, well-ventilated area.
- Foliar sprays with copper based fungicides.
- Use of bactericide.

HARVEST

75-90 days is the proper time for harvesting. The heads should be firm-to- hard at harvest. Delayed harvest may increase the risk of splitting mature heads, if the soil moisture content increases suddenly. Hybrid are preferred for commercial production because of the high percentage of crops that can be harvested at one time. Harvested heads must be cooled immediately after harvest.

OUR DISTRIBUTION NETWORK

SALE OFFICES	CONTACT	EMAIL ADDRESS	TEL NO/MOBILE NUMBER
SIMLAW SEEDS COMPANY	GENERAL MANAGER	**INFO@SIMLAW.CO.KE**	0722 200545/0734811861/ 020 316619
KITALE	SALES AND MARKETING MANAGER	SALES@KENYASEED.CO.KE	0726 141856/0722 205144/ +25405431909
NAKURU	BRANCH MANAGER	NAKURU@KENYASED.CO.KE	0721 868683/ 0737 868683/ 0722 205144
ELDORET	AREA SALES REPRESENTATIVE	ELDORET@KENYASEED.CO.KE	0726 141856/0722205144
BUNGOMA	AREA SALES REPRESENTATIVE	BUNGOMA@KENYASEED.CO.KE	0726 141856/0722205144
LOITOKITOK	AREA SALES REPRESENTATIVE	INFO@SIMLAW.CO.KE	0735089077
KARATINA	AREA SALES REPRESENTATIVE	INFO@SIMLAW.CO.KE	0733431238
MERU	AREA SALES REPRESENTATIVE	INFO@SIMLAW.CO.KE	0774736199
KISII	AREA SALES REPRESENTATIVE	KISSI@KENYASEED.CO.KE	0726 141856/0722205144

Simlaw Seeds ®

Superior & Reliable

For further inquires contact our head

office:

0722 200545/ 0734 811861

email:info@simlaw.co.ke

:0794 546935

shop online: www.simlaw.co.ke

:simlaw_seeds

:simlaw seeds company limited