

Leafy Vegetable Production: requirements, growing, diseases, harvesting and marketing

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1. Main Issues

- Nutritional value
- Family groups of leafy vegetables
- Climatic requirements
- Production system
- Diseases and Pests
- Harvesting

2. Useful Information

2.1 Nutritional Value

Nutritional value is roughly 90% water, 4% protein, 0.3% fat, 5% carbohydrates, 1% fibre and a few quantities of vitamins A, B1, B₂, C and Nicotinamide. Cabbage is the least nutritious while kale, rape, choumoellier, and tsunga are the most nutritious.

2.2 Family groups

Most of them belong to the brassica species and to a family known as cruciferae. They are grown for their leaves.

2.3 Optimum growth requirements of soils

Can be grown on different types of soils preferably well drained soils. It can be grown all year round in most parts of Zimbabwe. They prefer cool or warm rather than hot conditions, a moist

climate rather than a dry one. Best results are obtained with fertile friable soils (with high organic matter content) such as sandy loam soils with pH range of 5.5-6.5. All brassica need correct watering even during the rainy season. Both periods of drought and water logging are undesirable for the growth of the crop.

2.4 Land Preparation

The soil should be well prepared to a fine tilth to allow better establishment of the crop. Prepare beds which are 1.0-1,2m wide and of any required length as for small individual/community gardens.

2.5 Fertilizer Application

The crops are heavy feeders and respond well to well rotted organic manure. Manure can be applied at the rate of 30-50t/ha broadcasted or banded at planting. This can be supplemented with fertilizer at the rate of 200-400kg Comp per ha applied before planting. Two or three top dressings with Ammonium Nitrate (AN) at the rate of 100kg ha should be applied three to four weeks after transplanting. Leaf colour determines frequency of watering and application of AN.

2.6 Planting

Although ideal planting can begin in early February, kale and rape can be grown throughout the year. Planting is done from seedlings. General principles of nursery management apply. Transplant seedlings when they are 100-150 mm high into rows 500mm apart.

2.7 Weed Control

Keep the vegetables free of weeds all the time especially during the early crop development stage.

2.8 Disease and Pest Control

This is the most critical aspect in vegetable production and following are the prevalent pests and diseases in Zimbabwe:

Type	Symptoms	Control
Bacterial diseases	Leaves and stem go slim and then rot. It affects level of productivity.	Use only tested seed and source. Destroy all affected plants.
Damping off	Seedlings appear pinched at soil level and subsequently collapse and wilt.	Sow seeds thinly. Dress the seeds before planting with Thiram. Avoid overwatering.
Pests		
Aphids	Feed on plant sap hence destroy	Use chemicals such as

	leaf structure and quality.	Dimethoate, Malathion 25%wp for control. Follow instructions on the label for directions of use.
Diamond back moth	Caterpillars feed on the underside of the leaves causing leaf shot hole effect. This is a major problem in the hot months.	On small plots do hand picking of the larvae and squash them. Inter-planting with tomato or chilli repels the diamond back moth adults or spray with neem formulation. Use malathion 25%wp or Thiodan 50%wp or Dipterex to spray the caterpillars.
Bugrada bugs(also known as vana rudo)	Feed on plant sap and cause leaves to wither instantly.	Use chemicals such as Dichlovers and karate.

2.9 Harvesting and marketing

Fertility of the soil determines time to maturity. Rape and tsunga can be harvested 4weeks after transplanting. Choumoellier takes about 100-120 days to maturity and the same for cabbage. Cabbages are sold as heads while the rest are sold as bundles.

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