Relief Services (CRS) for its guidance in the preparation of Keyhole Gardening contents and UNICEF for its contribution in Mutrition. Rural Self Help Development Association (RSDA), Send a Cow Lesotho, UNICEF, World Food Programme, World Vision Lesotho. Special thanks to Catholic Foundation, Ministry of Agriculture and Food Security, Ministry of Forestry and Land Reclamation, National University of Lesotho (NUL), Rehobothe Church, (FNCO), Growing Nations, Lesotho Agricultural College, Lesotho College of Education, Lesotho Council of NGOs (LCN), Lesotho Red Cross Society, Machobane Apostolic Faith Mission, CARE Lesotho, Caritas, Catholic Relief Services (CRS), Food and Agriculture Organization (FAO), Food and Mutrition Coordination Office attribution to MAFS, FAO and HGNWG. Any derivative work must be approved by FAO and MAFS. The members of the HGNWG are the following: Action Aid, endorsed by, the Home Gardening and Nutrition Working Group in Lesotho (HGNWG) and can be freely reproduced for non-commercial purposes ensuring Disaster Assistance (OFDA) and the UK Department for International Development (DFID) in 2013. These materials were developed in coordination with, and Security (MAFS) with financial support from the European Commission Humanitarian Aid and Civil Protection Directorate (ECHO), the Office of U.S. Foreign These materials have been commissioned by the United Nations Food and Agriculture Organization (FAO) in Lesotho and the Ministry of Agriculture and Food

A special thanks to:













'Moho, re ka hlola tlala!

and I am committed to improving the yield of my crops!

My name is

IMPROVE YIELDS



INCREASING THE PRODUCTION FROM YOUR HOMESTEAD GARDEN

By planning how we plant, we can increase our yields and protect our crops from pests and diseases. Compost making will enrich our soil and help us to improve our production in a sustainable manner.

1. ORGANIC PEST CONTROL REMEDIES

Some organic pest control mixtures can be made from different plant materials from your household.

3 medium onions

Molasses spray is a feeding deterrent for chewing insects

(caterpillars, grasshoppers, cabbage moths and grubs) on the

1 teaspoon of detergent

side of the leaves.

more potent.

Boiling water

3) Once cool, use as a spray.

3) Spray undiluted to top and under

4) Add vinegar to this brew to make it

Vinegar (optional)

GARLIC SPRAY

Garlic spray is a general pest deterrent.

INGREDIENTS

10 garlic heads

5 small hot chillies

METHOD

1) Mix all ingredients together, bring to 3) Store in labelled glass jars. the boil and simmer for 10 minutes

MOLASSES SPRAY

2) Let it stand overnight then add

2 tablespoons of milk

abbage family

1 tablespoon of molasses

the colour of weak tea.

2) Mix in detergent to help the

molasses stick to the leaves.

1) Mix molasses with hot water until

CHAMOMILE TEA SPRAY

Chamomile tea is a mild fungicide.

INGREDIENTS

1 litre of hot water

INGREDIENTS

METHOD

1 chamomile tea bag

1) Pour boiling water over a

2) Leave to soak/steep for ten minutes.

chamomile tea bag.

METHOD

4) Use by diluting 1 cup of the mixture to 9 litres of water.



spray on a sunny day, because the oils can cause foliage to burn.

sugarcane, grapes or sugar beets into

ONION SPRAY

Onion spray is used to control aphids, spiders and other pests.

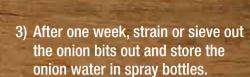
INGREDIENTS

2 cups of onion skins and peels (and/or garlic pieces)

METHOD

1) Collect 2 cups of onion skins, peels and ends in a container. Garlic pieces can also be added.

2) Fill container with warm water. Soak for a few days (up to a week).



Warm water

4) Spray undiluted on leaves.

5) Or you can bury the onion and garlic pieces around plants.

VINEGAR SPRAY

Vinegar spray is for cabbage moths and grubs on the cabbage family, caterpillars and sap-sucking insects such as stink bugs, aphids and mealybugs.

INGREDIENTS

1/4 vinegar to 3/4 of water 1 teaspoon of detergent

METHOD

1) Mix 1/4 of vinegar with 3/4 of water. 3) Spray top and under side of the

2) Mix in detergent to help the vinegar to stick to the insects and leaves of the plant.

Begin treating for insects as soon as

you notice signs of an infestation. The

Vinegar can be used

VINEGAR SPRAY

sooner you start the easier it will be to get rid of the insects.

MILK SPRAY

Milk spray is an anti-fungal spray used for example on **Powdery Mildew.**

INGREDIENTS

Equal parts full cream milk and water

METHOD

1) Mix equal parts full cream milk and 2) Spray plants every 2 days to control fungal diseases on peas, green peppers and pumpkin family.

Clear garden area of debris and weeds which are breeding places for insects.

VEGETABLE OIL SPRAY

Oil spray is for scaled and soft bodied insects such as mites, aphids, mealybugs (oil suffocates insects)

INGREDIENTS

1 tablespoon of dishwashing detergent 1 cup of vegetable oil

METHOD

1) Mix 1 tablespoon of dishwashing

store in an air tight bottle.

detergent and 1 cup of vegetable oil. 2) Mix together until it turns white and

3) Dilute 1 to 2 ½ teaspoons of the emulsion to 1 cup of water in a spray bottle. Spray on plants covering all leaf and stem surfaces.



rhubarb stalks are very

be toxic to humans.

nutritious, rhubarb leaves can

Do this during mild weather because if it's hot, it may burn the plant's leaves.

Use companion plants to trap insects

Plants such as Mustard and Chinese cabbage can act as trap crops and decoys to insects.



Use a band of grease to stop ants climbing the trunk.

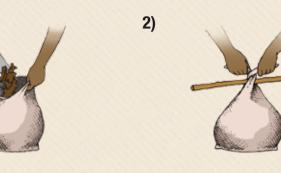
COMPOST TEA

Compost tea is manure or compost dissolved in water.

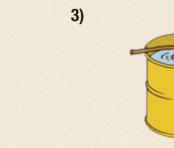
Nutrients and micro-organisms from the compost and/or manure remain in the water which can be used to irrigate the garden as a complement to applying manure and/or compost.

How to make compost tea

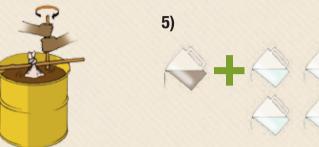
plant-eating animals).



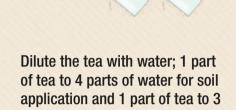
Tie the bag containing manure or Fill a large cloth bag with 1 part of compost or manure (manure from compost to the centre of a thick



Fill a container with 3 to 10 parts of clean water and hang the bag across it by the stick so that the bag is completely covered in water.



Stir occasionally for 1 to 3 weeks, until the water is a deep brown



on plant leaves.

It is recommended that you use only cow, sheep and goat manure when making compost tea to parts of water for direct application prevent diseases.

Apply compost tea directly to the leaves to give plants a quick shot of nutrients

- Compost tea works best when applied in the morning and evening under cool, moist conditions.
- Apart from compost tea, manure and compost should still be applied to improve soil fertility.

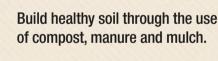


OTHER PEST CONTROL HINTS

Prevention

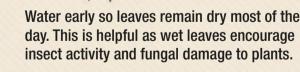
Pull out weak, infected plants and destroy them away from your garden.

P * P * P * P





Interplant and rotate crops so that pests and diseases do not spread throughout the garden.



Use companion plants to mask smells

Herbs and highly aromatic plants such as camphor, mints, lavender, rosemary, sage and other herbs that have spicy/bitter scents, can be used to mask the scent or appearance of crops that are desirable to pests.













Minimise insect habitats by

clearing debris and weeding



Control ants

Control ants to reduce aphid and scale infestations on trees.





PEPPER/GARLIC PESTICIDE SPRAY

Pepper/Garlic pesticide is a general pesticide for control of caterpillars, ants, mites and other insects.

INGREDIENTS

METHOD

or thyme.

3 hot green peppers (canned or fresh) 3/4 teaspoon of liquid soap 2 or 3 cloves garlic

1) Crush the garlic and pepper

2) Add the liquid soap and water. Let

the mixture stand for 24 hours.

for general pesticides

There are other plants you can use

The following plants also contain anti-fungal or antibacterial chemicals

that you can extract and spray onto crops: chamomile, chives, eucalyptus, garlic, horseradish, marigolds, parsnips, turnips, rhubarb

3 cups of water

3) Strain out pulp and spray onto both tops and bottoms of leaves.





This spray is also suitable to give sick plants a lift.

buying pesticides, and it's safer for your

garden, your family, the natural wildlife and the environment











