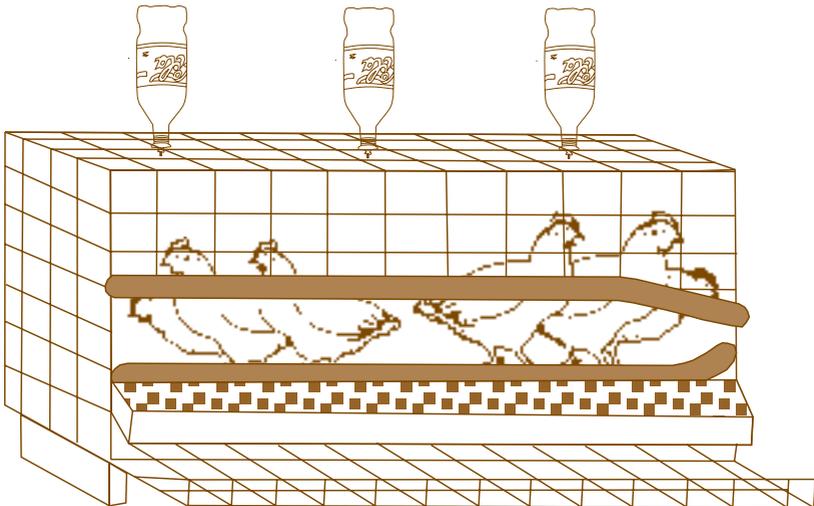


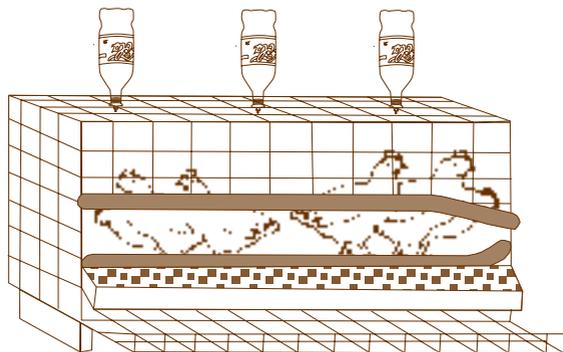


DEPARTMENT: AGRICULTURE
REPUBLIC OF SOUTH AFRICA

Small-scale egg production



Small-scale egg production



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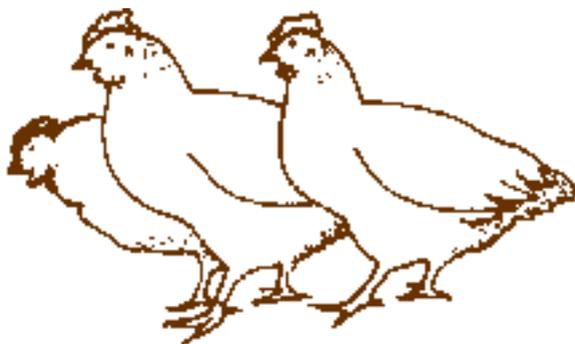
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Introduction

As a result of the high cost of meat, people are constantly looking for a cheaper source of protein. Eggs provide a valuable yet affordable source of high quality protein and vitamins required for normal growth, especially for children.

This guide will show you how to build, manage and maintain your own affordable household egg production unit on a small scale. Later on you can increase the size of your unit in order to sell eggs in your community, if the demand for eggs is big enough.

The information given is based on poultry production in the warmer to hot areas of South Africa.



Why keep hens?

- ❑ You can provide eggs for your family by keeping 9 to 12 hens.



- ❑ Each hen will lay up to 6 eggs per week. In this way you can even start your own small business.
- ❑ If you have 9 hens, they will lay 8 to 9 eggs per day. You will need to sell 4 eggs per day to pay for the feed of the hens. The remaining eggs can be used for household consumption.
- ❑ Eggs provide a valuable yet affordable source of high quality protein and vitamins required for normal growth, especially for children, when meat is too expensive or is unavailable.

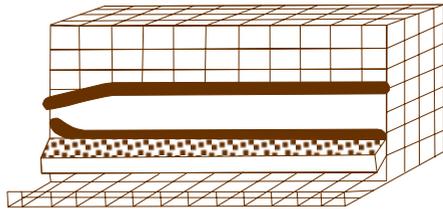


- ❑ If there is a demand for eggs in your area, you could expand and sell more of the eggs.

Cage

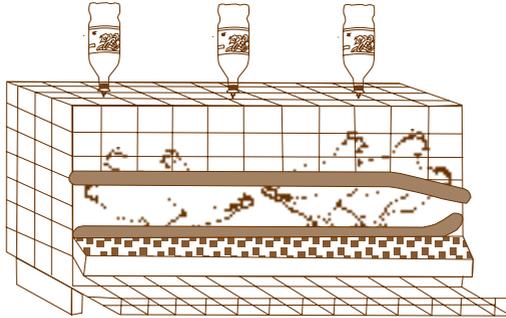
It is best to keep the hens in a cage.

This means that:



- the hens can be kept in a small space
- the hens are kept in a cleaner environment
- the eggs are not broken easily
- the eggs stay clean
- the eggs can be collected easily
- the hens get fewer diseases
- there is less chance of hens being stolen
- they need very little care
- it is very easy to keep the cage clean as the manure falls through the mesh floor
- you can easily see when drinking water is finished
- feed is not wasted easily
- it makes good record keeping possible.

- ❑ You can buy the cage or make your own. It is, however, cheaper to make the cage yourself (see instructions on page 11).
- ❑ The cage should not stand on the ground to ensure that the manure falls through.



- ❑ Put the cage on poles, bricks or fasten it to the wall of a house, hut, shed or hang it from ropes tied to poles.
- ❑ The cage should be protected from overhead sun and rain by an overhang or roof (e.g. thatch).
- ❑ In hot climates keep 9 hens in a cage—3 in each compartment.

(In this way there is enough space for limited movement, and they can all get to the feed trough at once.)

- ❑ In cold climates, 4 hens can be kept in one compartment (total of 12), but then their movement is very limited.

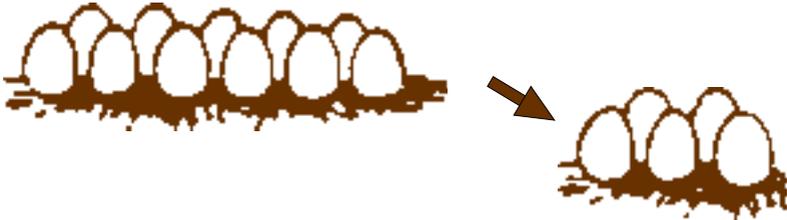
Hens

- ❑ You can buy day-old chicks and rear them, but this is expensive and often the chicks die if they do not receive good care.
- ❑ It is better to buy young hens, called point-of-lay pullets (18-19 weeks old) which are ready to start laying eggs.
- ❑ The hens you buy must be of very good quality and be fully vaccinated against all known poultry diseases.
- ❑ The best layer breeds to buy are: Amberlink or Hy-line laying hens—these hens will start laying within 2 weeks after being bought (20-21 weeks of age).
- ❑ First (pullet) eggs are small, but gradually become larger after about 2 months.

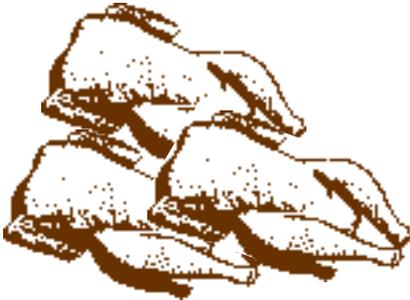
The number of eggs laid also peaks halfway through the year and then starts dropping.
- ❑ The hens should be kept for one year and then sold as cull hens. If the feed is very cheap, the hens can be kept up to 2 years.



- ❑ If you keep the hens for longer than one year, they will start laying fewer eggs until they stop altogether.



They will, however, eat the same amount of food, so profits become less and the enterprise eventually uneconomical.



- ❑ Before selling the hens for slaughter, you must order new pullets. Do this at least four months ahead of time.

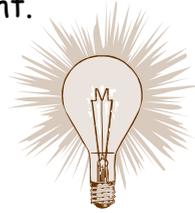
- ❑ You can only start selling your old hens once the new hens

are in production, especially if you have standing orders with clients and do not want to disappoint them.

- ❑ The money made from the old hens will pay for the new hens.

Eggs

- ❑ In order for the hens to lay as many eggs as possible, they must have enough light.
- ❑ They need 16 hours of light every day.
- ❑ This can be done easily if you have electricity, because you can put the lights on before sunrise and let them stay on for some hours after sunset.
- ❑ If you do not have electricity, the hens will not lay as many eggs as they would with the extra electric light.
- ❑ To get maximum egg production without electricity, place your cage outside where the hens can make use of natural light.
- ❑ Do not put the cage in direct sunlight—the hens will get too hot and die.
- ❑ With 16 hours of light every day, each hen will lay about 280 eggs in one year and without extra light they will lay about 200 eggs.



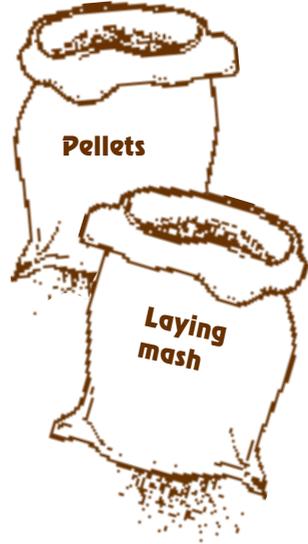
Feed

- ❑ To lay well, the hens must get the best possible feed.
- ❑ Hens need plenty of calcium in their diets to lay eggs with hard, strong shells.
- ❑ It is best to buy a good commercial feed such as laying mash/pellets.

The mash is specially formulated to provide all the nutrients they need in the correct quantities.

You can buy this feed at most cooperatives.

- ❑ Feed must be available in the trough at all times, as well as cool, fresh water in the bottles.



Prevent wastage, do not overfill the trough

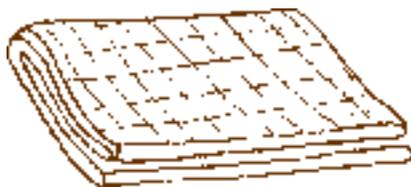


- ❑ Each hen will eat 120 to 150 g of feed per day (some will be wasted, landing on the floor).
- ❑ One bag of feed (50 kg) will last approximately 1 month—make sure that you have bought enough feed (2 months supply) before the hens arrive.
- ❑ Make sure that you have a permanent supply of fresh drinking water for the hens.

Manure

Fresh manure can be covered with a layer of sawdust or dried leaves, grass or any other dry vegetation every day. It will become good compost if turned regularly. This method also helps to remove bad smells.

The manure can be sold in feed bags as organic fertiliser or compost for vegetable gardens. You can also use it for your own garden or vegetable garden or lawn or cattle pastures.



Old feed bags

Health and disease

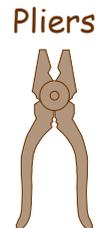
- ❑ If you buy point-of-lay pullets from a reliable producer, they will be fully vaccinated against all major diseases—no need for you to buy vaccines.
- ❑ To make sure that the hens adapt quickly to their new home, give them Stresspack in their drinking water when they arrive at your home.
- ❑ If there is a sudden serious outbreak or epidemic of a specific poultry disease in your area (e.g. Newcastle disease), vaccinate all hens against the disease immediately. If the hens get lice, treat them with Karbadust powder.
- ❑ Keep wild birds away from the hens and their feed, to prevent the spread of the disease to the hens.
- ❑ Make sure that the hens at all times:
 - have clean, fresh, cool water (wash water bottles once a month)
 - have enough fresh feed (throw wet, mouldy or rotten feed away)
 - are kept under shelter away from the sun, rain and cold.



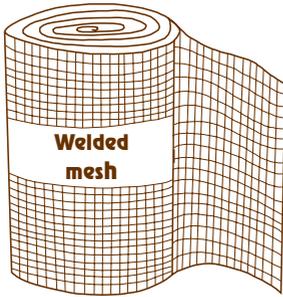
How to make your own cage

- ❑ Be sure to make your cage strong enough to carry 9 to 12 hens.
- ❑ The size of the cage must be 120 cm long by 70 cm wide by 45 cm high.
- ❑ You can build it from galvanised welded mesh, cane, bamboo or wattle sticks.
- ❑ The floor of the cage must be made of welded mesh so that the hens' droppings will fall through. This ensures that the floor on which they stand stays clean.

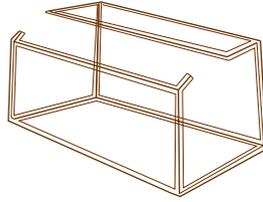
Tools you will need



Material you will need



Galvanised welded mesh
(type = 25 x 50 mm)



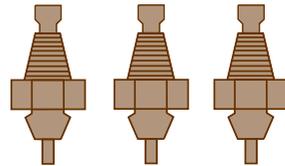
Metal frame



Gutters



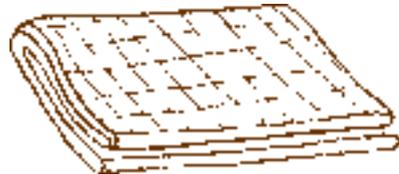
Hose pipe—old, second-hand or damaged pipe



3 drinking nipples



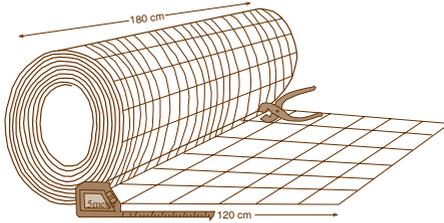
2 l plastic cold
drink bottles



Old feed bags

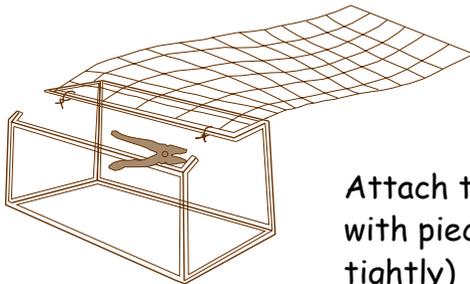
Cage

Measure and cut the welded mesh



Cut the right length of mesh, 180 x 120 cm, and bend it until flat

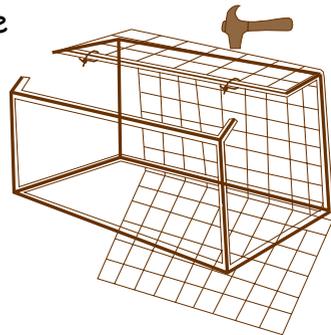
Get your frame ready



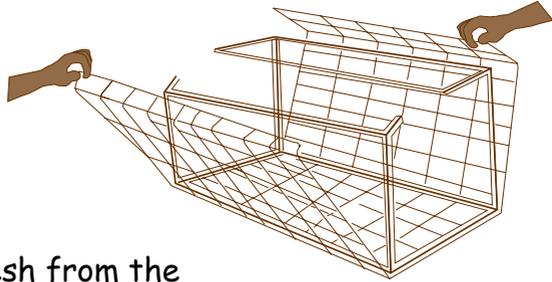
Attach the mesh to the frame with pieces of wire (secure tightly)

Bend the mesh around the frame

Use a hammer to flatten the mesh and keep the edges and corners flat and sharp

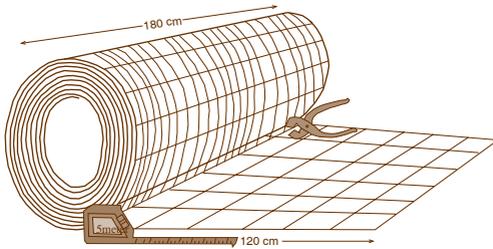


Cut the binding wires

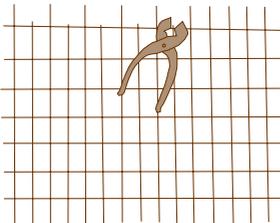


Separate the mesh from the frame after cutting the binding wires

Measure and cut 4 side panels



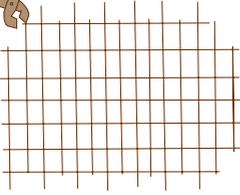
Cut the 4 panels
55 x 45 cm, 2 for
inside and 2 for
outside



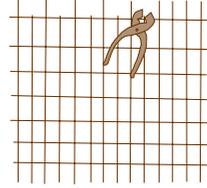
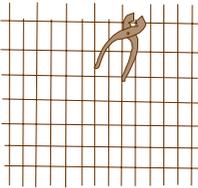
Cut every second tip off for
both inside panels



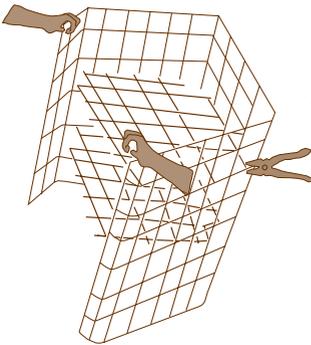
Cut 3 corners off for the
2 inside panels



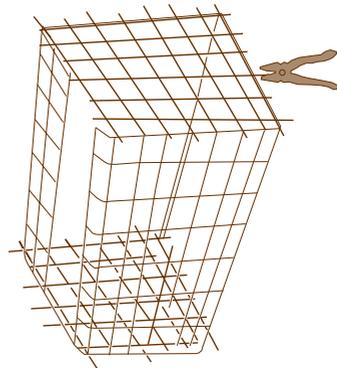
Cut every second tip off on the 2 outside panels



Fasten the panels



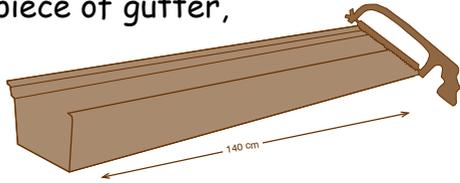
Use pliers to fasten the 2 inside
panels to form 3 equally sized
compartments



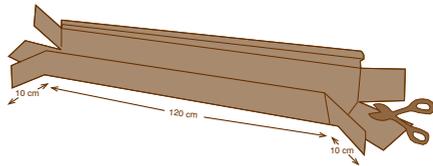
Fasten the 2 outside panels.
Neaten, cut off or bend all
sharp points or edges

Feeder

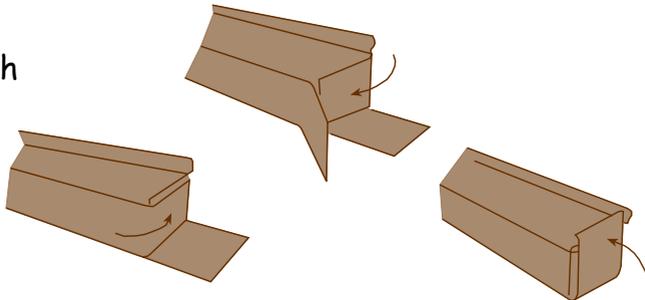
Use a hacksaw to cut a piece of gutter, 140 cm long



Mark off 10 cm at each end of the gutter and cut along the bends



Fold each piece inward



Neaten and flatten by using the hammer and pliers. Remove sharp edges

Lastly, make a small hole on each end for securing the feeder to the cage with wire

Drinkers



Punch holes in each bottle cap using a nail and hammer—do not remove the plastic inner lining of the cap



Use a hand drill to enlarge the holes so that the nipple will fit tightly



Screw in the nipple until it fits well



Punch a hole on the bottom of the bottle with a hammer and knife to make a small opening for air to flow in



Unscrew the cap of the bottle and fill it with water but close the opening underneath with your finger to prevent leaking

Screw the cap and turn the bottle up-side down and attach the bottles to the cage in the centre of each compartment

Use pliers to bend the mesh slightly for the bottle top to fit in tightly

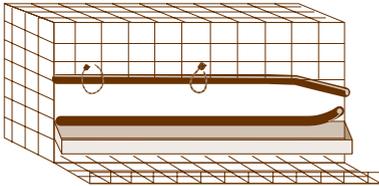
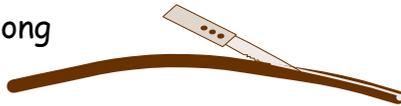
Plastic pipe protection

Prevent injury to the hens' necks by making sure that the pipe used is smooth



Cut 2 lengths (200 x 120 cm) of old plastic irrigation pipe or hosepipe

Slit both pipes open along their length



Fit one pipe over the back edge of the gutter and the other one over the top of the cage opening

Secure the pipes with wire or cable ties. Make sure that any sharp ends of the ties or wire are cut off short and are facing away from the hens' necks

Your cage is now ready

When putting the cage into position, remember to slant it forward slightly so that the eggs, once laid, can roll down the slope gently into the egg tray. Test this before securing the cage.

MANAGEMENT PROGRAMME FOR LAYERS (P.O.L) 18-20 wks

Activity	* 18-20wks Point-of-laying (P.O.L)												* Culling period				
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May			
1. Point of lay pullets arrive	X																
2. Give stresspack in water during arrival	X																
3. Daily inspection of unhealthy chicks	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
4. Collection and record of mortality	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
5. Clean water bottles and supply always	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
6. Ensure that enough fresh feed is available	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
7. Collection of eggs	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
8. Recording of eggs	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
9. Order new pullets before culling or selling														X			
10. Take out the bag with manure under the cage		X	X	X	X	X	X	X	X	X	X	X	X	X			
11. Buy enough feed a month before new flock arrive	X																
12. If there are lice, treat with Karbadust/Blue death powder		X	X	X	X	X	X	X	X	X	X	X	X	X			

NB: *Layers are bought at point-of-laying in this system

*** They will be fully vaccinated already against all major diseases BUT if there's a serious outbreak, vaccinate all hens immediately**

MANAGEMENT PROGRAMME FOR LAYERS (P.O.L) 18-20 wks

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NB: *Layers are bought at point-of-laying in this system

*** They will be fully vaccinated already against all major diseases BUT if there's a serious outbreak, vaccinate all hens immediately**

USING A MANAGEMENT CALENDAR

A management calendar is just a reminder of what you should do each week or month to make sure your chickens are healthy and happy and that they produce eggs regularly.

The calendar can be divided up into months and weeks. You can either use the one that has been filled in or you can use the one on the next page to fill in to suit your conditions.

This can be put on a wall near the cage or it can be kept in the house as your reminder.

For further information contact

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