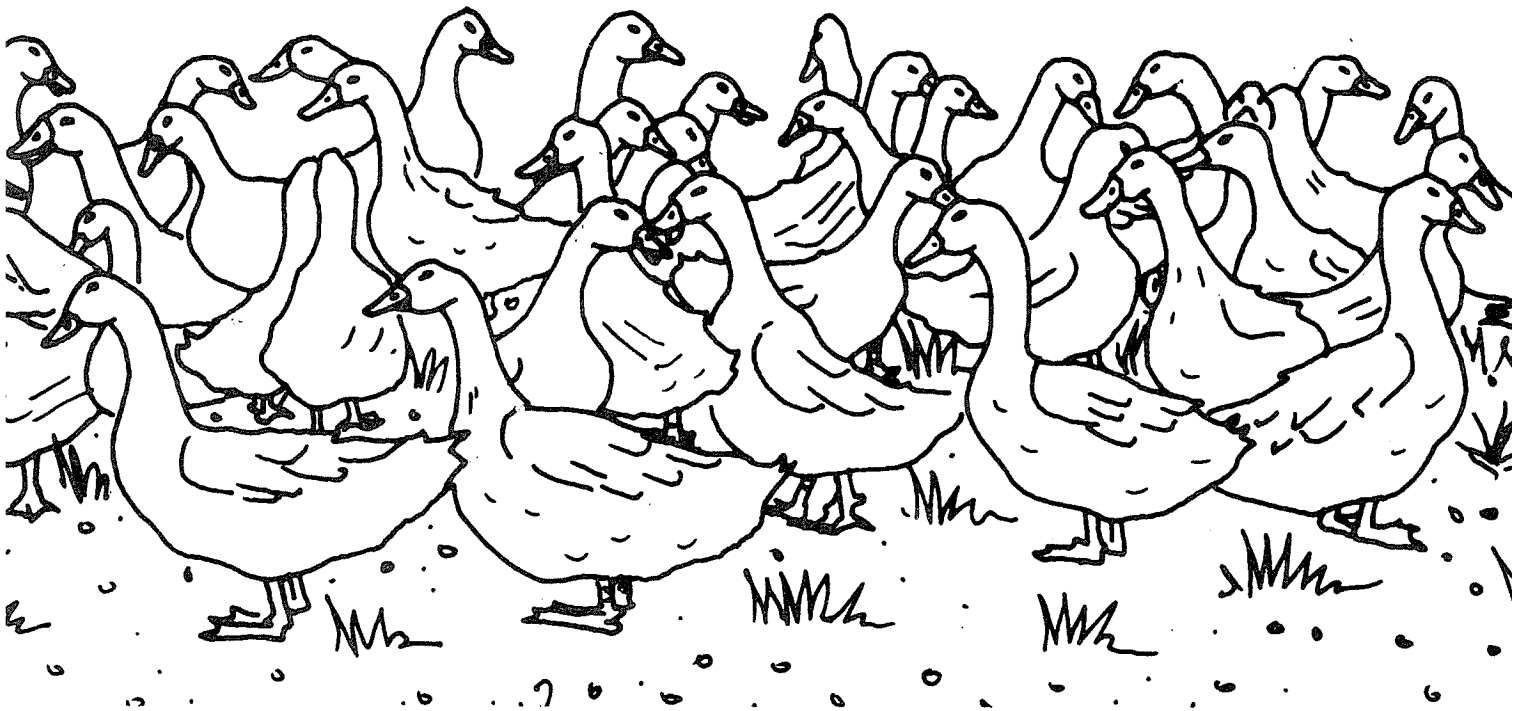


# raising ducks 2

further improvement  
a larger flock



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# **raising ducks 2**

**further improvement  
a larger flock**

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## PREFACE

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The first 26 volumes in FAO's Better Farming Series were based on the **Cours d'apprentissage agricole prepared** in Côte d'Ivoire by the **Institut africain de développement économique et social** for use by extension workers. Later volumes, beginning with No. 27, have been prepared by FAO for use in agricultural development at the farm and family level. The approach has deliberately been a general one, the intention being to create a basic model that can be modified or expanded according to local conditions of agriculture.

Many of the booklets deal with specific crops and techniques, while others are intended to give farmers more general information that can help them to understand **why** they do what they do, so that they will be able to do it better.

Adaptations of the series, or of individual volumes in it, have been published in Amharic, Armenian, Bengali, Creole, Hindi, Hungarian, Igala, Indonesian, Italian, Kannada, Kipende, Kiswahili, Lao, Malagasy, Malay, Malayalam, Nepali, Oriya, Portuguese, Sango, Somali, Telugu, Thai, Tongan, Tschiluba, Turkish, Urdu and Vietnamese. This volume has been prepared for FAO by the Animal Production Service, Animal Production and Health Division.

Requests for permission to issue this manual in other languages and to adapt it according to local climatic and ecological conditions are welcomed. They should be addressed to the Director, Information Division, Food and Agriculture Organization of the United Nations, Viale delle Terme di Caracalla, 00100 Rome, Italy.

Booklets 27 to 39 in the FAO Better Farming Series were written and designed by Tom Laughlin, working closely with the technical divisions responsible. The artwork in booklets 39 to 41 is by Consuelo Macias Duimich.

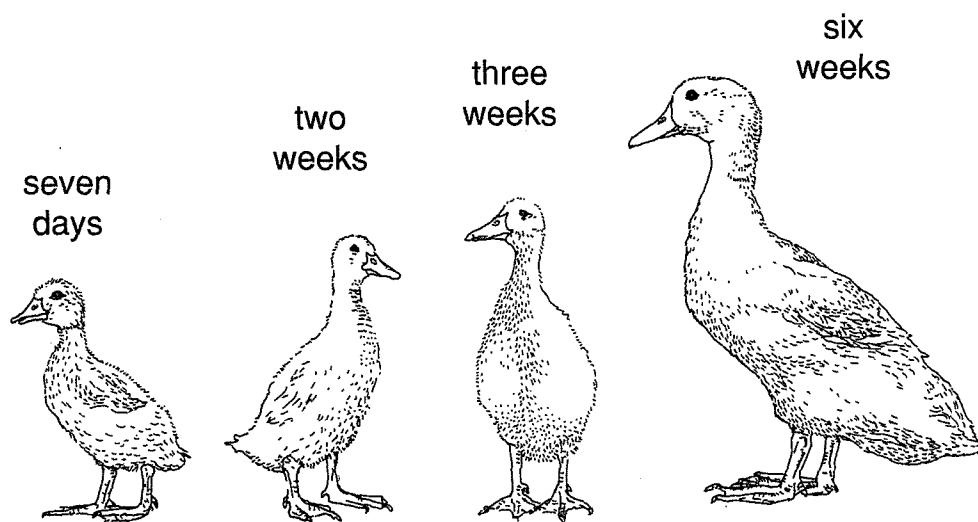
# OUTLINE OF THE BOOKLET

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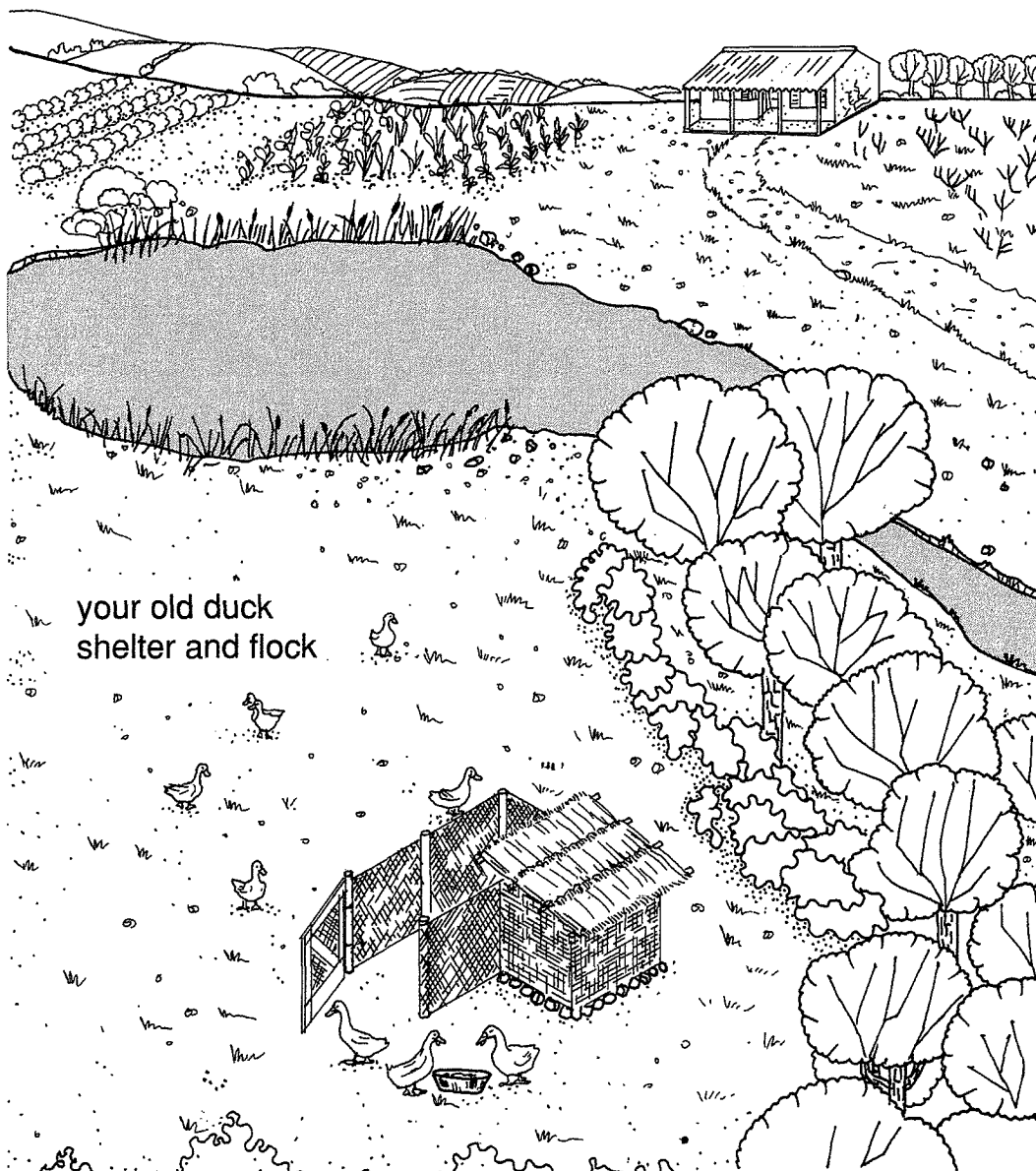
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# INTRODUCTION

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1. In the last booklet in the Better Farming Series, booklet No. 39, *Raising ducks 1: how to begin*, you learned how to raise a small flock of ducks.
2. You were told and shown how to raise a flock of from 6 to 24 ducks living by themselves with very little help from you and finding most of their own food.



3. With a small flock of ducks you found that with the eggs and the meat you got you had more to eat and, as a result, you and your family were able to live better.

you and your family



4. You may also have found that you could sell some eggs and meat at the market and make a little extra money to help with other family needs.

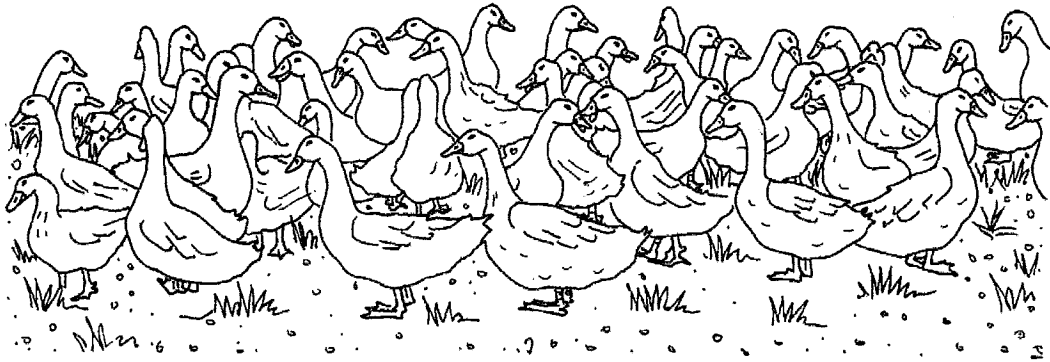
at the market



5. Now that you know more about ducks and how to raise them, you may wish to raise even more.

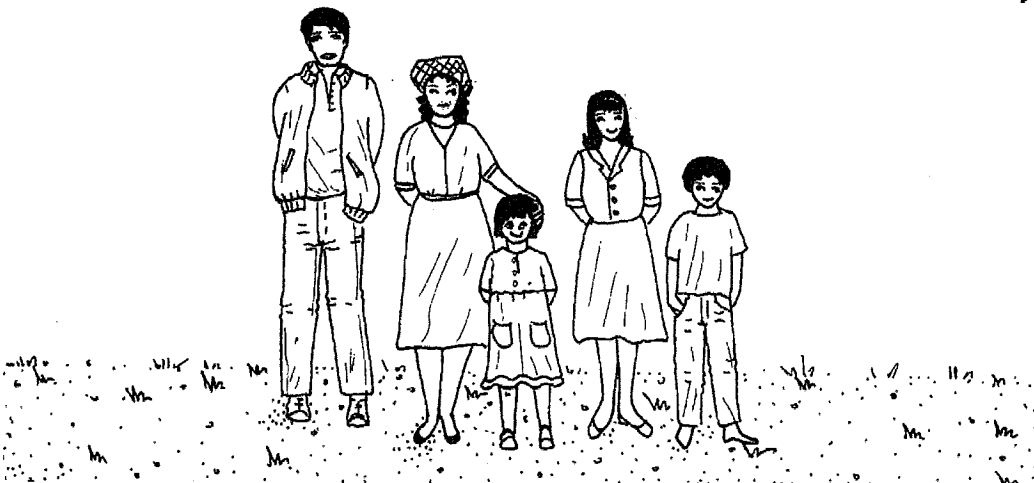
6. At the end of *Raising ducks 1*, you were told that you can raise as many as 60 ducks in much the same way as you raise a smaller flock.

a flock of 60 ducks

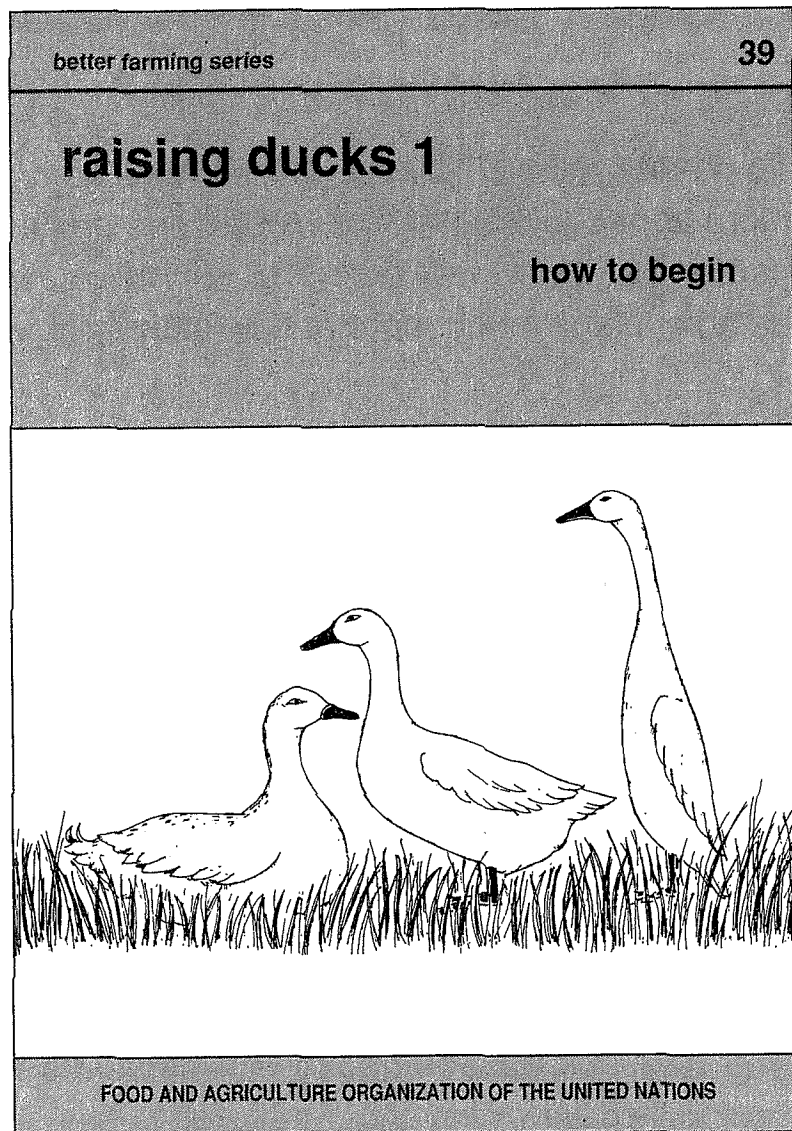


7. To do this you will have to learn a bit more about ducks and work a little harder. However, with 60 ducks you will be able to sell much more at the market.
8. If you think that the job of raising a larger flock is too great for your family alone, try to get a farm family near you or other families in your village to join you in raising ducks.

another farm  
family



9. Now, if you think that you might like to raise a larger flock, let us begin by looking at some other things that you should know.
10. However, first it would be a good idea to read *Raising ducks 1* again. That way, what you have learned earlier will be fresh in your mind.



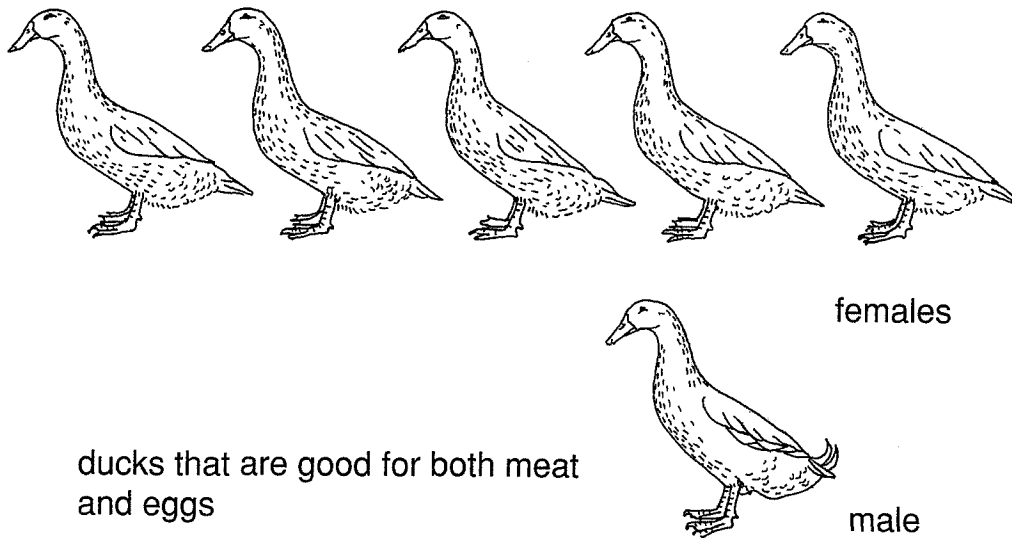


# ABOUT RAISING MORE DUCKS

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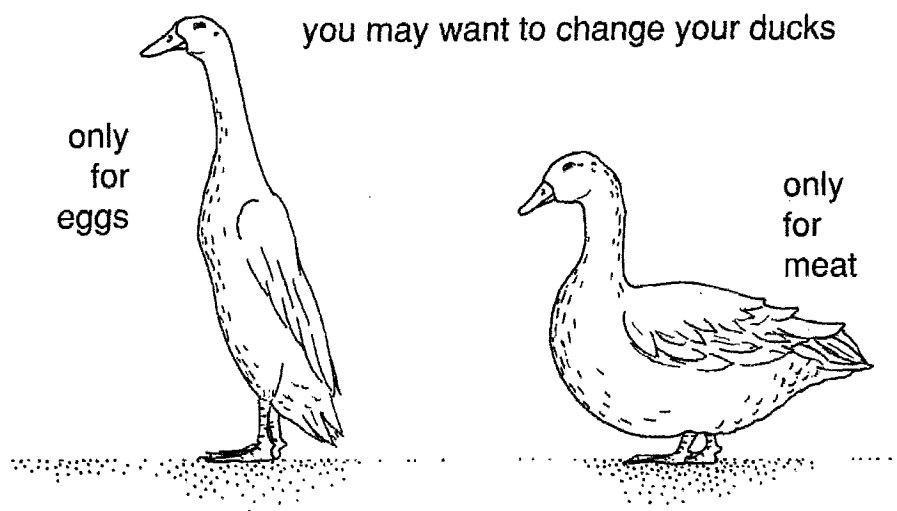
## The ducks

11. In *Raising ducks 1*, you were told that you should begin by raising ducks that are good for both meat and eggs.



12. That was because having both eggs and meat would better serve the needs of you and your family.
13. However, with a flock of as many as 60 ducks you will get many more eggs and much more meat than a single family will need.
14. In fact, the reason for raising so many more ducks is to have enough to sell to your neighbours or at the market.

15. In some places people buy only the eggs from ducks and in other places people buy only the meat.
16. So one of the first things that you must think about is whether to raise the same kind of ducks or start all over with another kind.
17. To help you decide, talk to your neighbours and visit the markets to see what **sells best**.
18. If you decide to raise ducks **only for eggs** or **only for meat**, instead of for both eggs and meat as you did before, you will have to change your ducks completely.



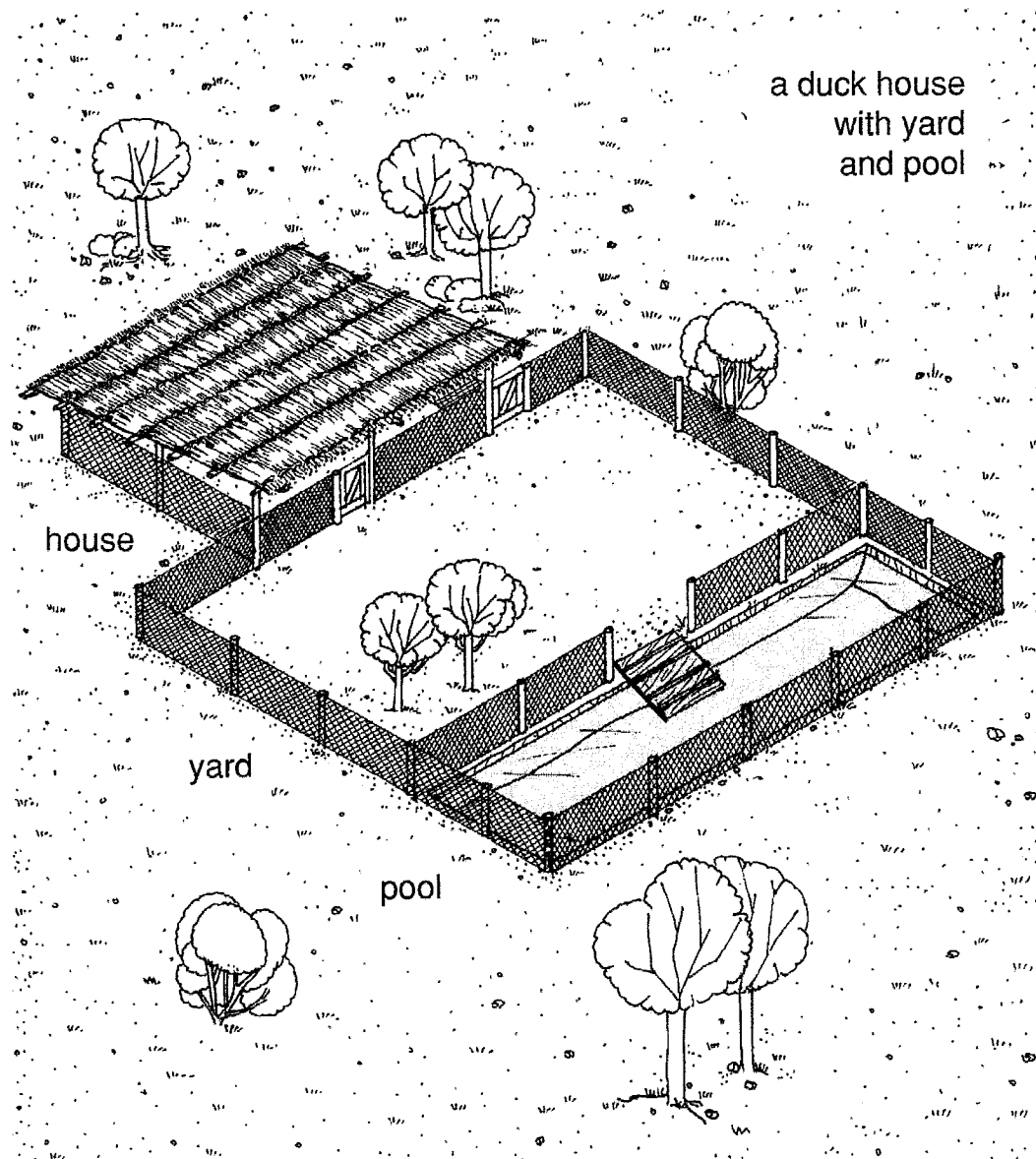
19. In the next booklet in this series, *Raising ducks 3*, you will be told how to:
  - continue with the same kind of ducks as you have now;
  - improve the same kind of ducks as you have now; by adding new, better ducks to your flock;

- start all over again with a different kind of duck.

### **A better shelter and where to put it**

20. Raising a flock with as many as 60 ducks will take much more space. So you will have to find a bigger place near where you live, or near where the families who will work with you live, to raise that many ducks.
21. With your first small flock your ducks were outside by themselves much of the time and you put them inside only at night. So you needed only a small shelter.
22. Now, with a much larger flock that will be kept inside more, you will need a bigger and better shelter or house.
23. You will also need an enclosed yard or run that they can use on the days when you do not let them out.
24. When you do let them out, your ducks will wander about looking for food. So try to find a place for your duck house and yard near where they might go. That way you can watch them better.
25. Remember, ducks need a lot of fresh water **to drink all of the time**. So if you could put their house and yard near good drinking water it would save you time later and make your job much easier.

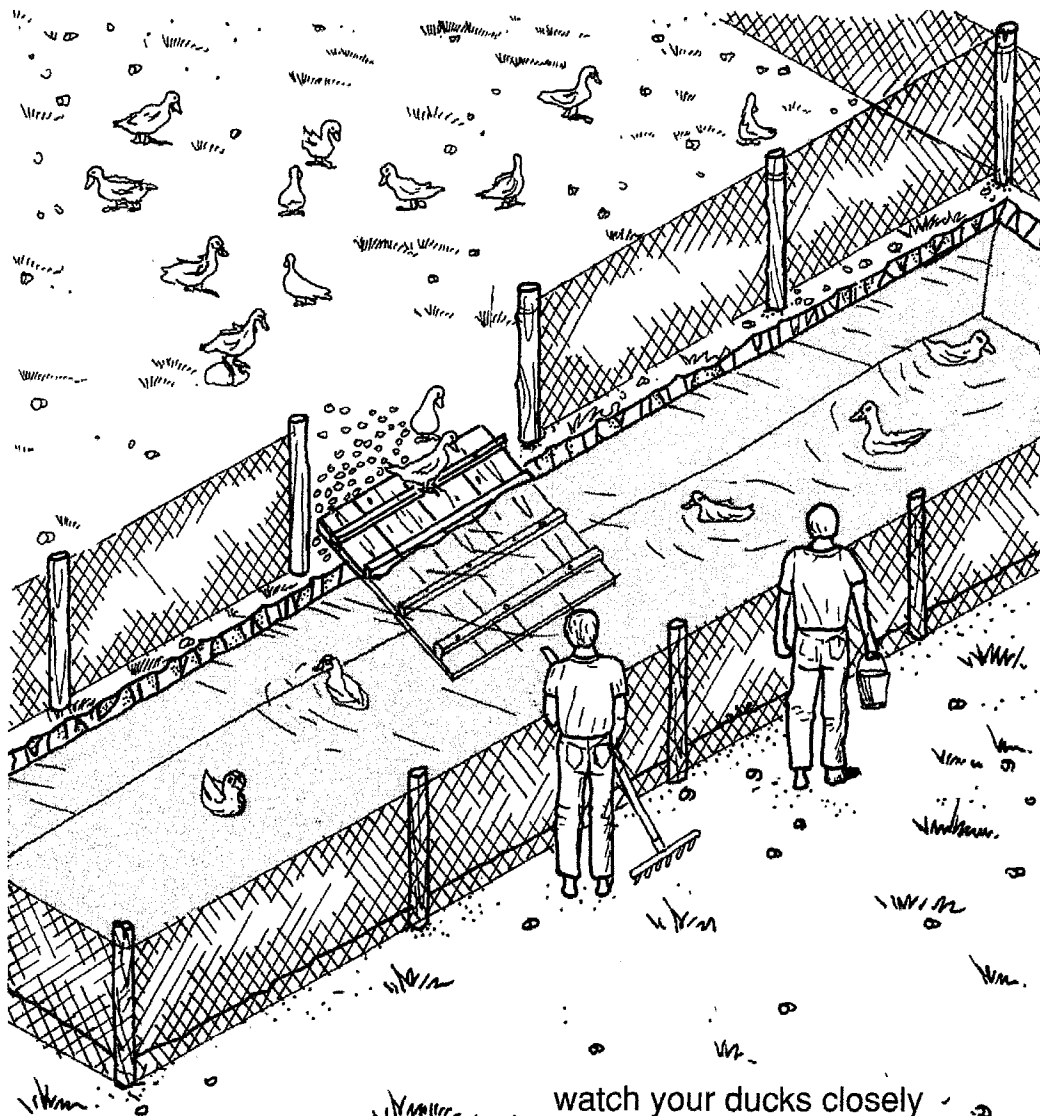
26. Below is a drawing of a duck house and yard suitable for a larger flock. A small pool is also shown. You will learn how to build this and several others later (see pages 31 to 50 in this booklet).



### More food and better food

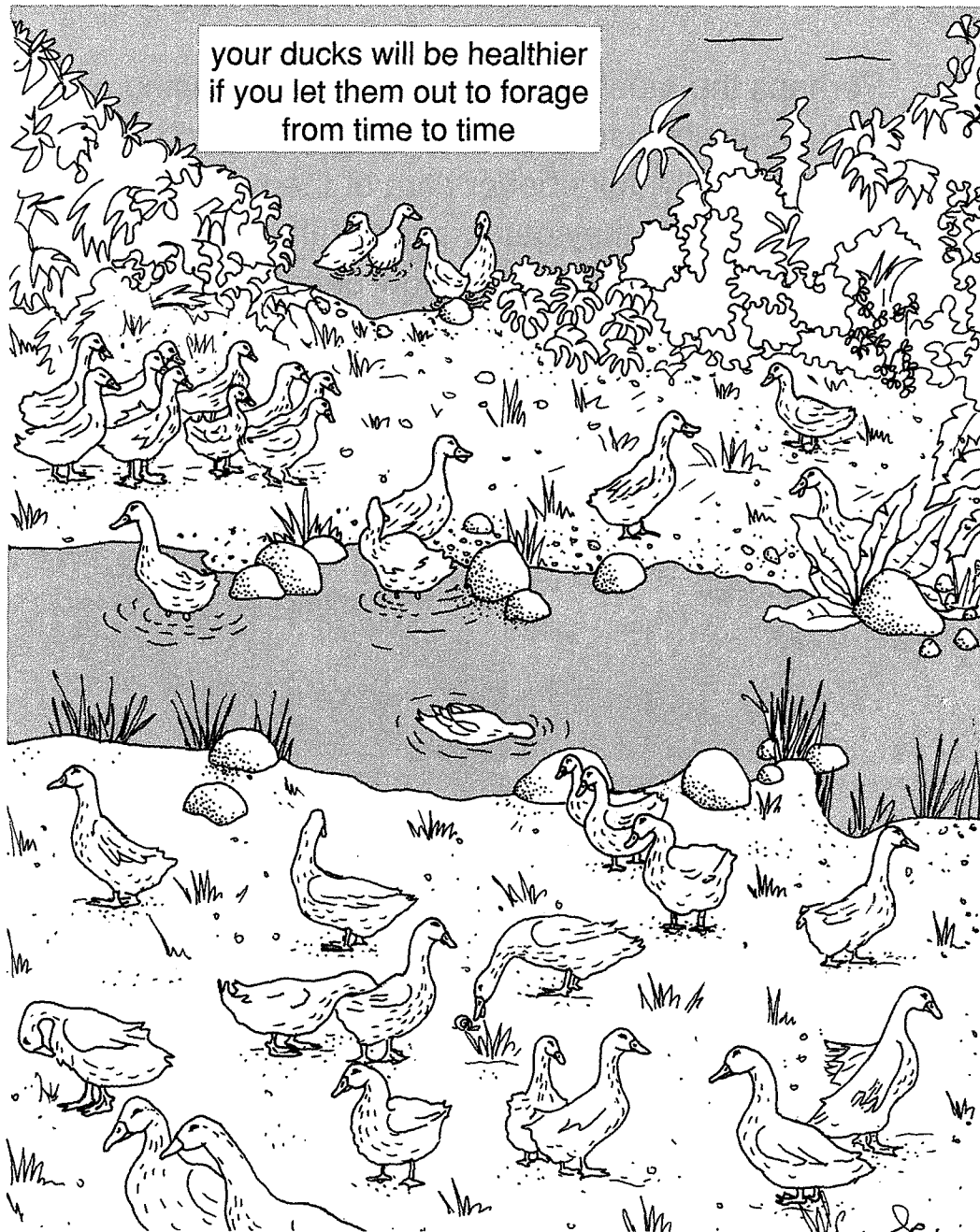
27. Nearly all of the food that your first duck flock ate, they found for themselves. The only food that you fed them was leftover food from your family.

28. If you decide to raise a larger flock, you will have to be prepared to give them all of the food they need on the days they do not go out. Also, the food you give them will have to be a more complete diet than just leftovers from your family.
29. Perhaps the most important reason for keeping a flock of ducks inside is so that you can watch them carefully, take better care of them and make sure that they get enough of the right kinds of food. That way they will grow better and grow more quickly.



watch your ducks closely  
to see that they are well

30. However, it is also important to let your ducks out from time to time. Ducks are foragers by nature and they will be happier and healthier if they can go out.



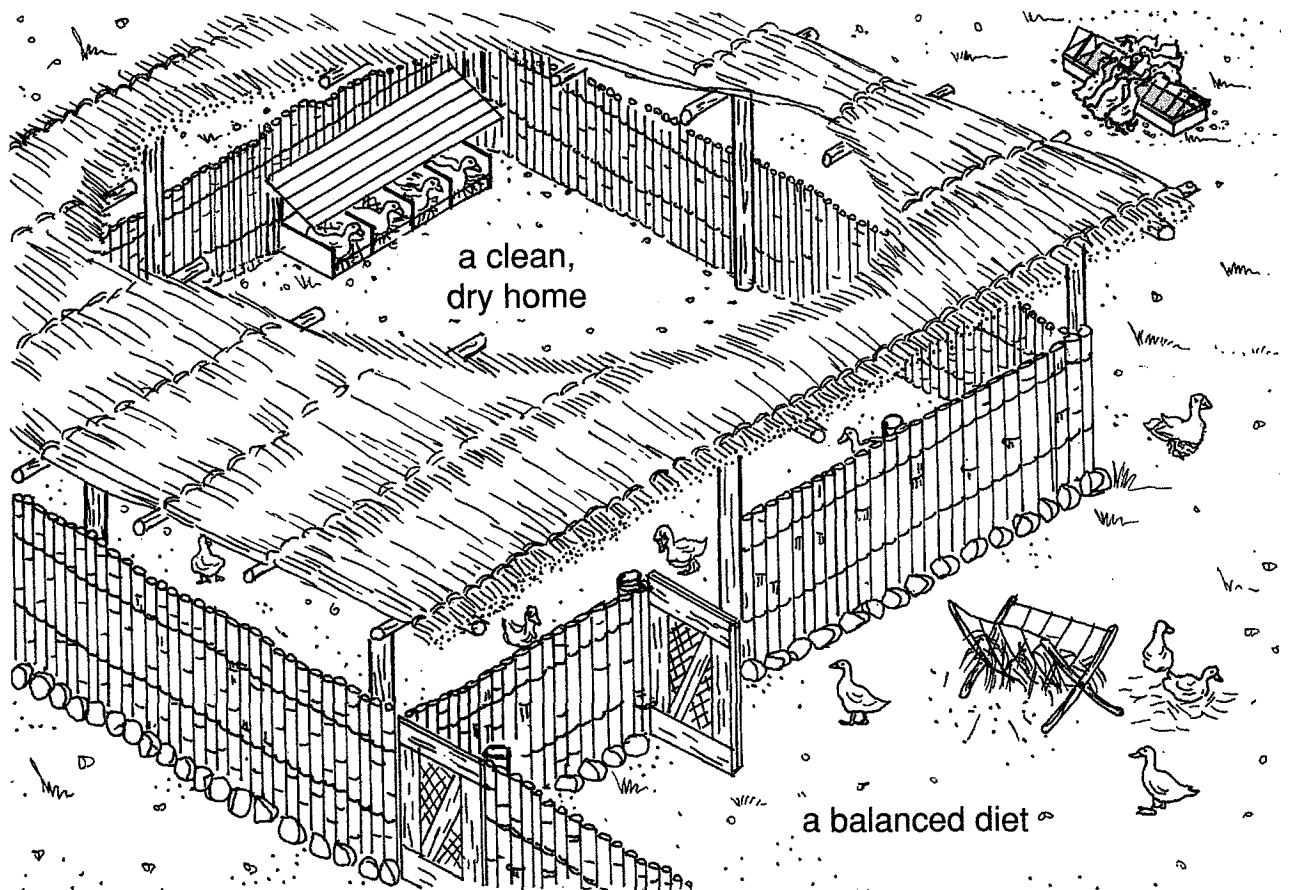
31. Also, when they are out your ducks will find a lot to eat that is good for them, and what your ducks find to eat for themselves, you will not have to provide for them.

32. As with you and your family, the foods that ducks eat fall into a number of feed groups. The most important of these are:
- **energy feedstuffs:** grains and grain by-products, roots and tubers, oils and sugar-cane by-products;
  - **protein feedstuffs:** oil meals, fish and fish by-products;
  - **vitamins and minerals:** prepared vitamin and mineral mixes are best, but if you cannot get these you can use good-quality fresh forage and, in addition, give your ducks limestone, bone meal, dicalcium phosphate and salt.
33. If your ducks eat the right amount from each feed group every day, they will be strong and healthy just as you and your family are when you eat the right foods.
34. So you need to learn as much as you can about the kinds of duck feedstuffs that you can get where you live so that you can plan a good, balanced daily diet for them.
35. In addition, when your ducks are out, try to see what kinds of food they eat. That way, when they come home, you can give them the feeds needed to balance their diet for the day.
- n
36. In the first section of the next booklet, *Raising ducks 3, Feeding a larger flock of ducks*, you will learn more about feed groups and the kinds of food in each group.

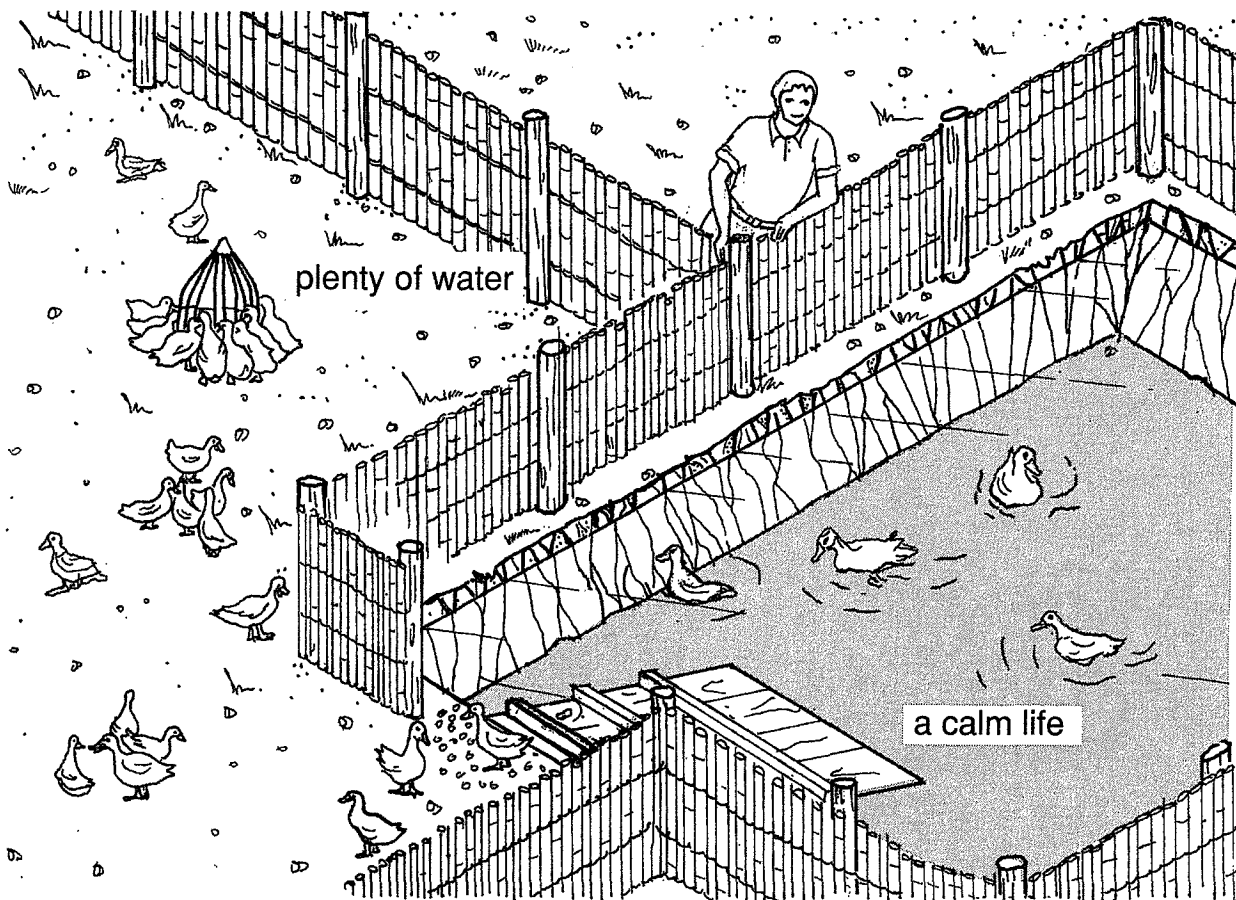


## Better care

37. If you decide to raise a larger flock of ducks, you will have to take better care of them than you did with your old, small flock.
38. Remember, when you have more ducks living more closely together, it will be easier for them to become sick. So you will have to work harder and take better care of them.
39. The keys to good duck care are:
- a balanced diet of enough feeds daily;
  - plenty of clean drinking water;
  - a clean dry place to live;
  - a quiet and calm life.

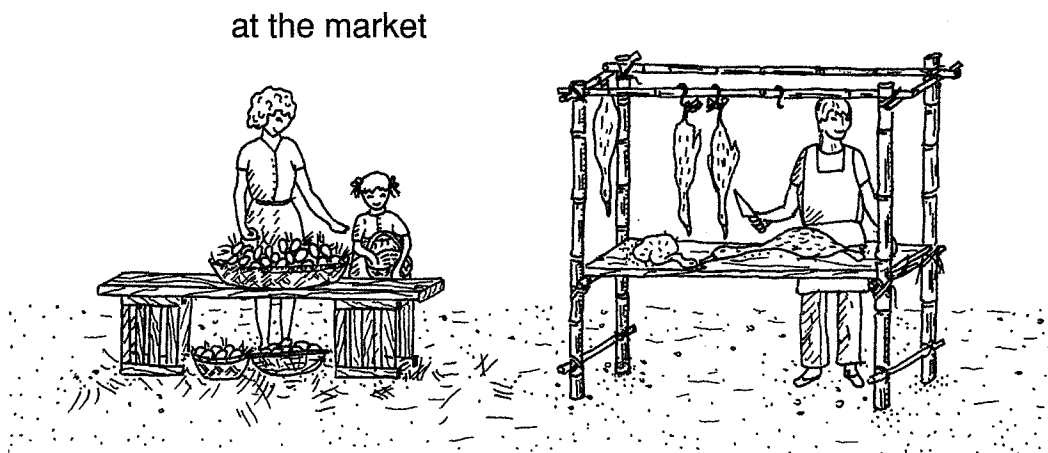


40. To make sure that your ducks have all of these things, you must take the time to watch them very carefully.
41. Watch them to see that they are eating and drinking well. Watch them to see that they are laying eggs well. Watch them to see that they are growing well and are gaining weight.
42. All of these things will let you be sure that your ducks are strong and healthy.
43. In *Raising ducks 3*, you will learn more about the care of your ducks. You will also be told some things that you can do if they get sick.

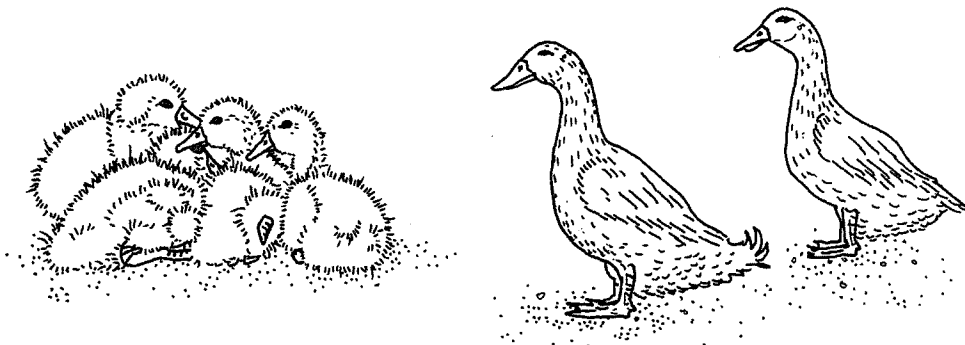


## Are you going to raise still more ducks?

44. So far in this booklet you have been told and shown a number of things that you must be prepared to do if you are going to raise more ducks. However, before you begin, here are a few questions that you might ask yourself.
45. Could you sell more eggs or meat at the local market if you had more ducks?

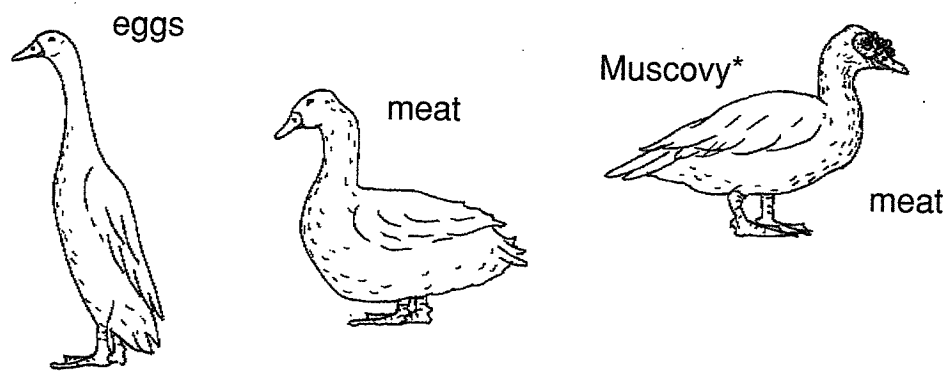


46. Are you prepared to raise more baby ducks to add to your present flock?  
or  
can you get enough improved local ducks where you live to add to your present flock?



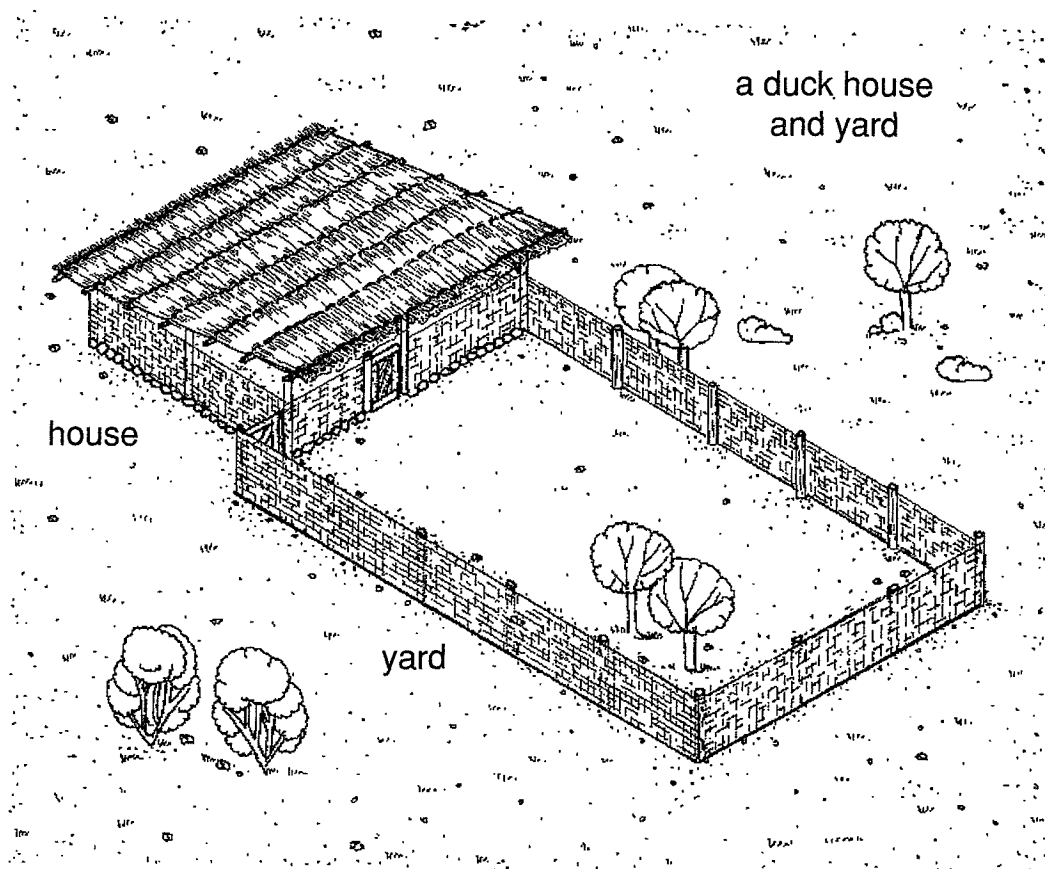
baby ducks or improved local ducks?

47. If you want to change your ducks, can you get the breed you want where you live?



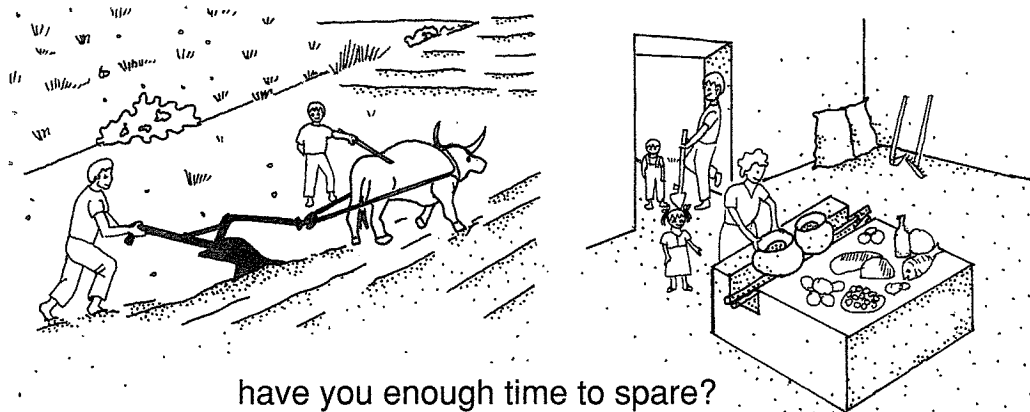
*\*see Raising ducks 3*

48. Do you have enough space to put a duck house and yard as large as the one shown below?



49. Can you find enough feedstuff of the right kind to feed a flock of 60 ducks? Do you have the time to gather it and prepare it?

50. Have you and your family enough time to spare from other farm and home tasks to care properly for a larger flock?



51. If you and your family do not have enough time of your own, can you find another family to share the work with you?  
Of course, you would also have to share the money that you make.



52. If you can answer yes to all or most of these questions, you are ready to begin.
53. In the rest of this booklet you will be told and shown many more things that you will need to know.

## HOW TO BEGIN AGAIN

---

### Choosing a place to raise more ducks

- 54. You will need about 80 to 90 square metres of space to put the duck house and yard for a larger flock.
- 55. If there is enough space near your old duck shelter perhaps you can put it there (see illustration on next two pages).

**Note:** If your old duck shelter is still good, you may wish to keep it and use it for something else. Such a shelter would be good for setting females, keeping baby ducks, storing feeders and drinkers or the feedstuffs that you need daily. However, to keep your ducks from getting sick, first clean it very well. You will learn how to do this in *Raising ducks 3*.

- 56. If there is not enough space near your old duck shelter, or if that place is not suitable for a larger duck house and yard, you will have to find another place.
- 57. If you are going to raise ducks with another farm family, perhaps you can find a place near where they live.
- 58. **Remember, the nearer the ducks are to you, the easier it will be to care for them and to protect them from their enemies.**



home of a nearby family  
that has agreed to help  
raise a larger duck flock

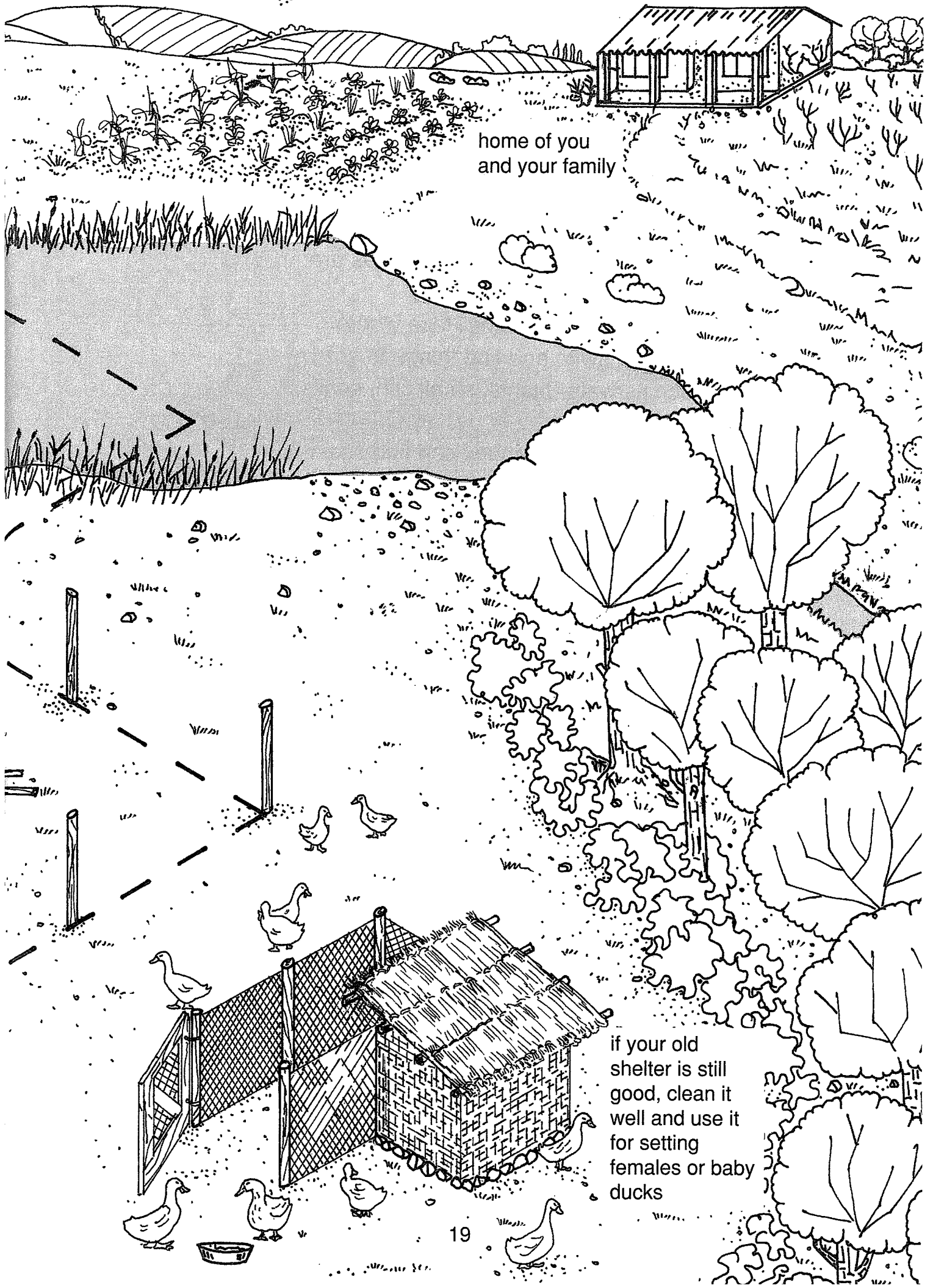
you may want  
to enclose  
part of the  
stream within  
the fence of  
the duck yard

if there are trees  
leave them  
for shade

if there is enough space  
near your old duck  
shelter, perhaps you can  
put your new duck house  
and yard there







home of you  
and your family

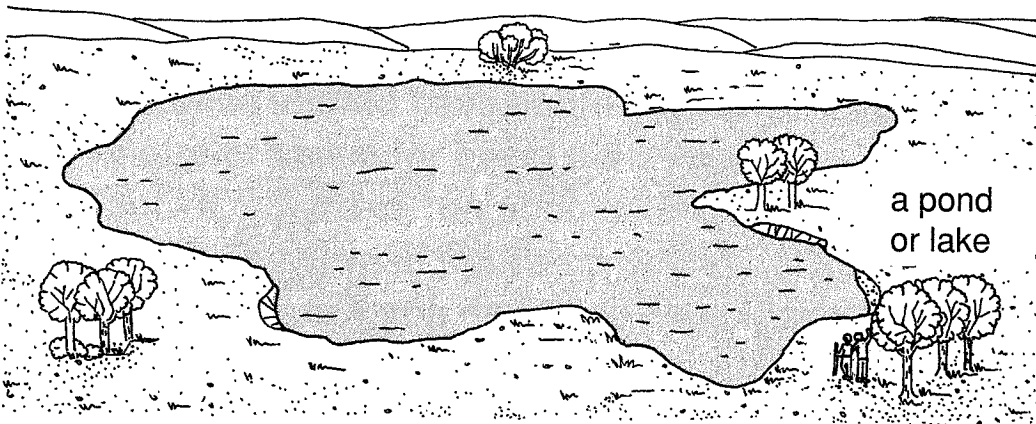
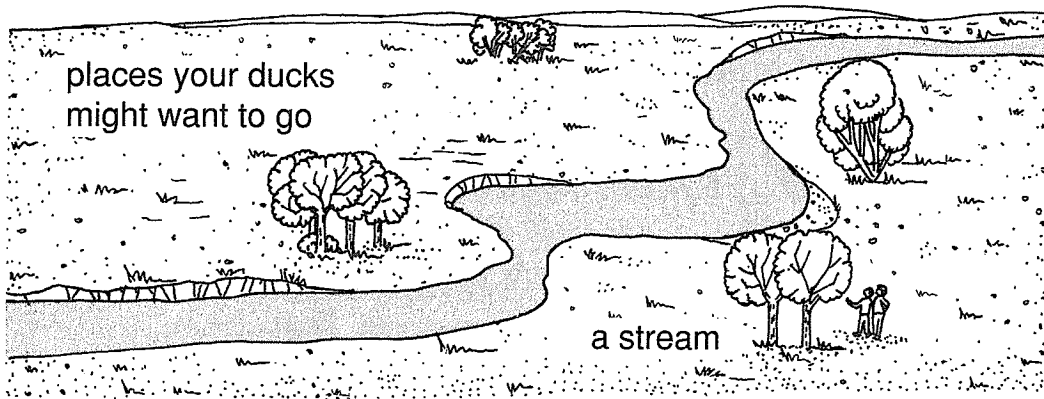
if your old  
shelter is still  
good, clean it  
well and use it  
for setting  
females or baby  
ducks

59. Theft may also be a problem, so you must watch very carefully to stop duck thieves.
60. Perhaps you can find a place near to where your ducks might go when you let them out. That way, they can easily find their way out and back. Such places are:

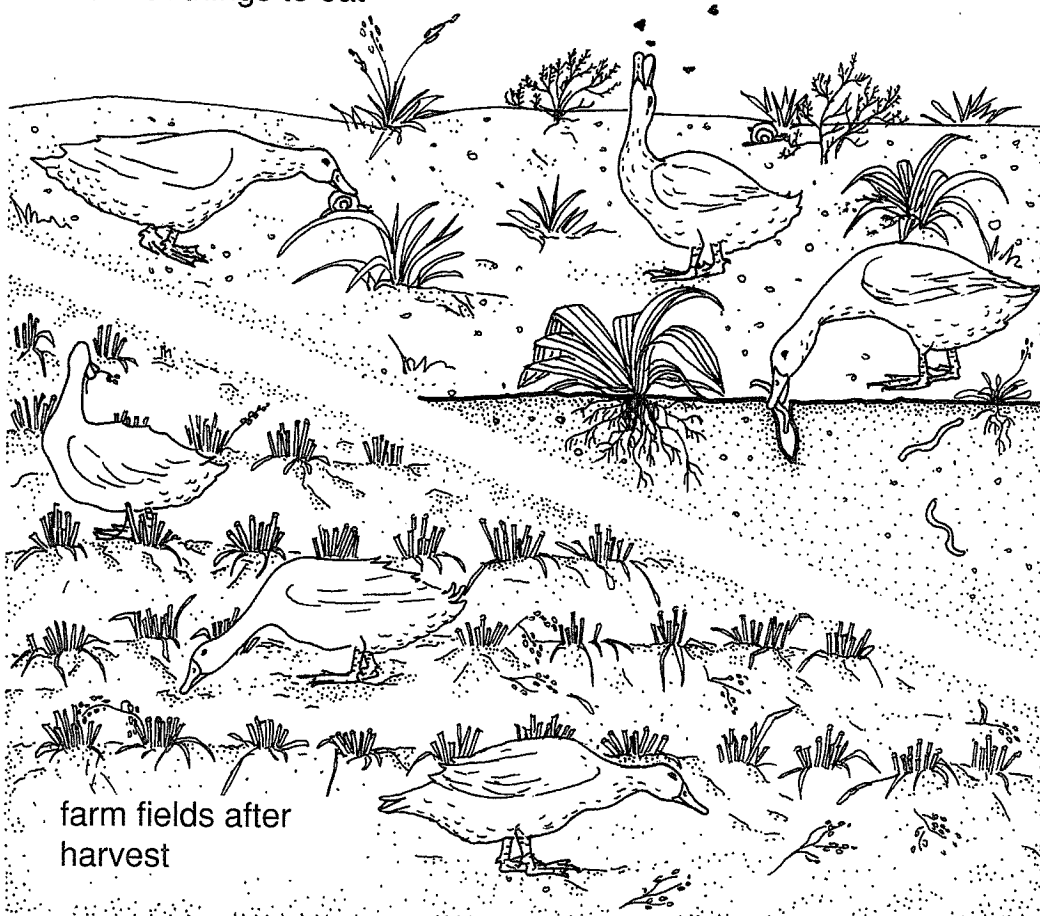
- a stream, pond or small lake where they can swim and find things to eat such as water plants, small fish, snails, crabs or frogs;
- a land area where they can find special things to eat such as snails, earthworms or insects;
- farm fields where they can pick up fallen grain or leaf material after harvest.

**Note:** It would be best to keep your ducks out of very large ponds or lakes unless you can fence in an area for them. Otherwise, they might swim too far away for you to get them back at night.

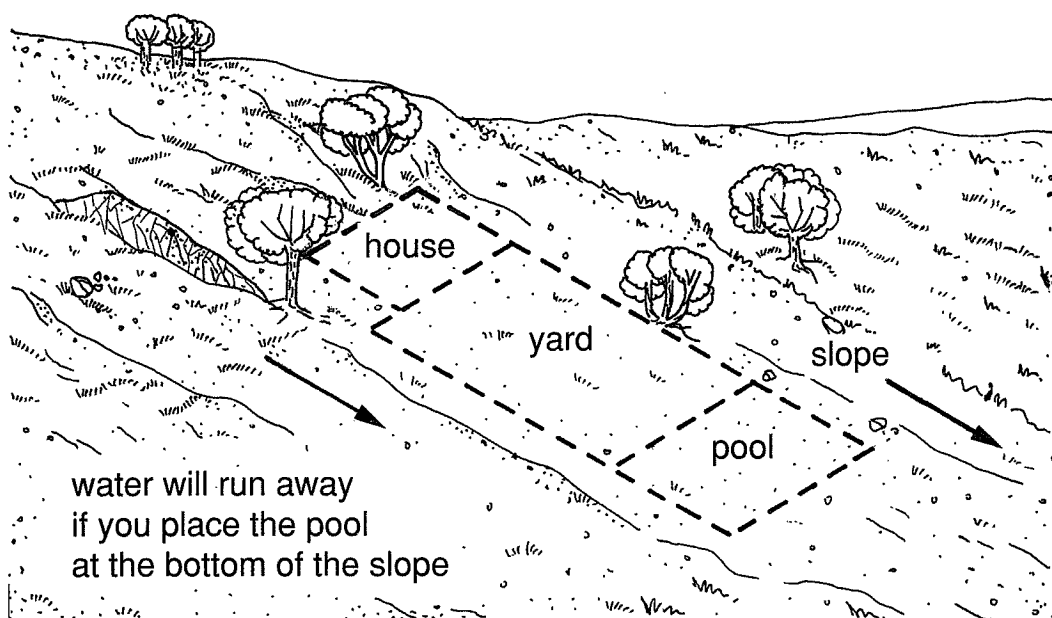
61. Also, be very careful that the place you choose is dry and drains well when it rains. Your flock, especially the young ducks, may become sick if their house or their yard is wet.
62. Be especially careful to avoid land which is low where water, if it collects, cannot be drained away.



land with things to eat



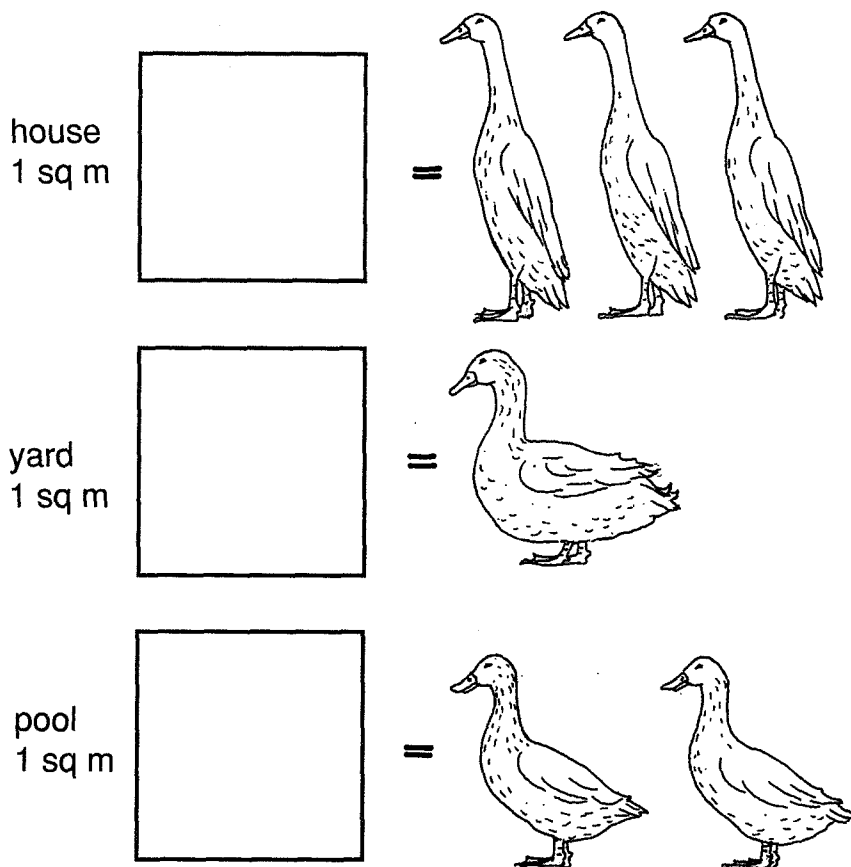
63. If you can, try to choose a place on slightly sloping ground so that it will drain well and stay dry.
64. A place with a slope is also good if you are going to build a pool. That way, by placing the pool at the bottom of the slope, the water will run away from the house and yard when your ducks swim and splash.



65. As you were told in *Raising ducks 1*, raising a flock of ducks is only one use for your land. So be careful not to choose a place that would be better for something else, such as planting field crops.
66. **Remember, it will be a lot more work to build a house for 60 ducks than it was to build a shelter or a pen for a small flock, so make sure that you have chosen the right place before you begin.**

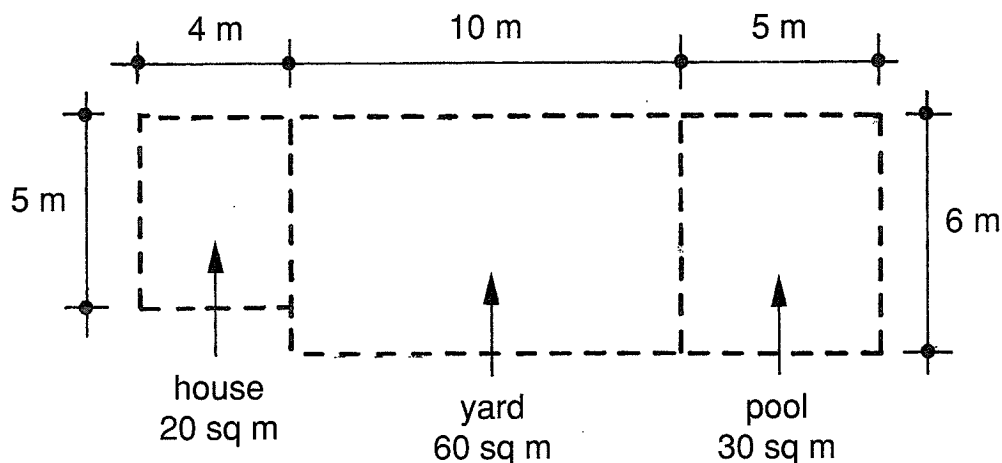
## Building a house and preparing a yard for more ducks

67. To raise a larger duck flock that will live inside more of the time, you will need a fair-sized house and a yard or run for your ducks. Also, you may decide to build a small pool for your ducks in the yard. You will learn about pools later.
68. **A house should have about 1 square metre of space for every 3 fully grown ducks. A yard or run should have about 1 square metre of space for each fully grown duck. If you decide to have a pool, it should have about 1 square metre of space for every 2 fully grown ducks.**



69. So, for 60 ducks you will need:

- a house of 20 square metres;
- a yard of 60 square metres;
- a pool of 30 square metres (if you decide to have a pool).



70. Remember, it is never good to crowd your ducks because the house and yard will more easily get wet and dirty and this may make your ducks sick. Therefore, if you have enough space, make the house and yard even a bit bigger than the sizes given in paragraphs 68 and 69.

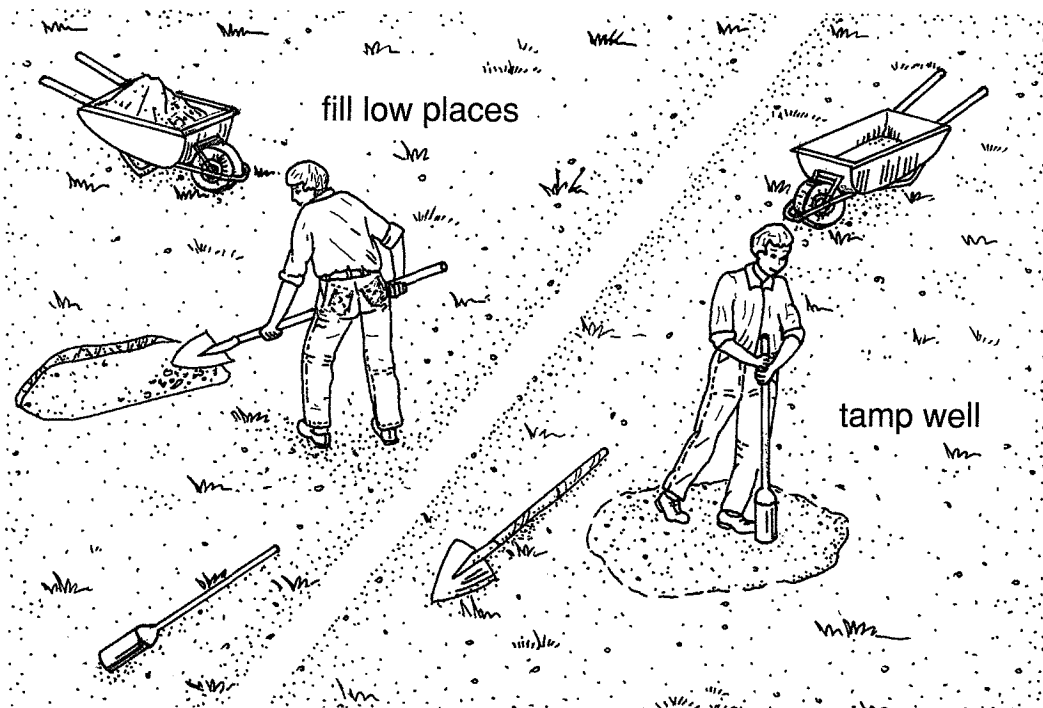
71. Building your new duck house and fencing yard and pool for the ducks, you can do in much the same way, using the same kinds of materials, as you used for your first shelter (see pages 22 to 41 in *Raising ducks 1*).

72. You will be shown how to build a suitable duck house for a larger flock and several ways to arrange a yard both with and without

a pool later (see pages 31 to 50 in this booklet), but first let us discuss duck yards, and then pools or places for ducks to swim.

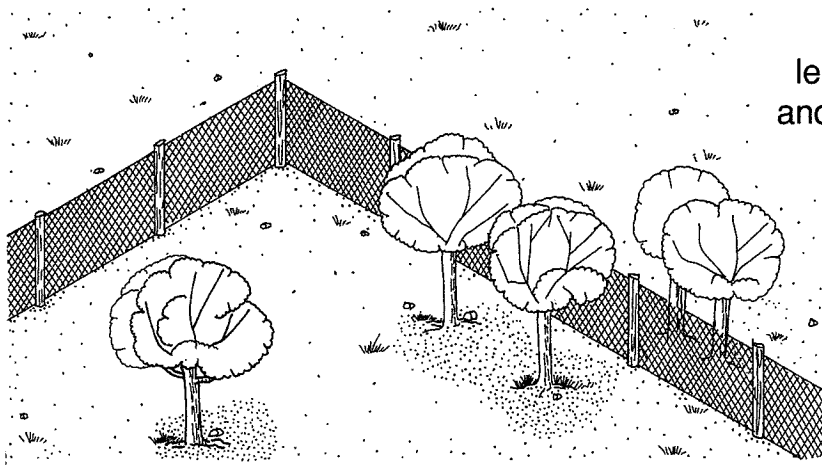
### **A yard or run for your ducks**

73. Since you will keep your ducks inside much more of the time, a large yard or run is as important as a house.
74. If you have chosen a place for your duck yard and house that is slightly sloping and drains well when it rains, you should easily be able to keep it dry and clean.
75. If your duck yard has low places that do not drain or tend to be wet, collect water or become muddy, fill these with good clean soil. However, when you fill a low place be sure to tamp the new soil well.



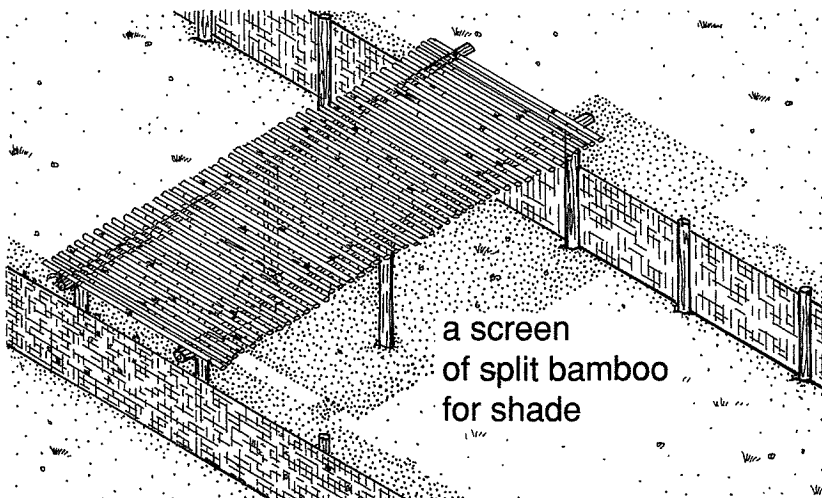


76. Remember, strong sunlight is bad for ducks. So there should be a shady area where your ducks can go during the hot part of the day.
77. If there are trees where you plan to put the yard, you could enclose a tree or two inside the fence, or place the yard so that there are a few trees just outside to provide shade for your ducks.



if possible  
leave trees inside  
and near the fence  
for shade

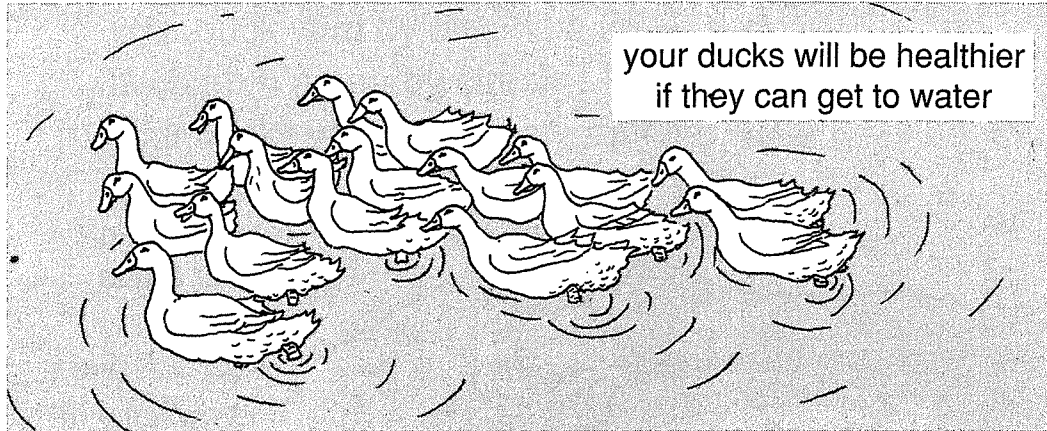
78. You could also build a screen cover of woven grass, bamboo or wood strips over one area of the yard to provide shade for your ducks.



a screen  
of split bamboo  
for shade

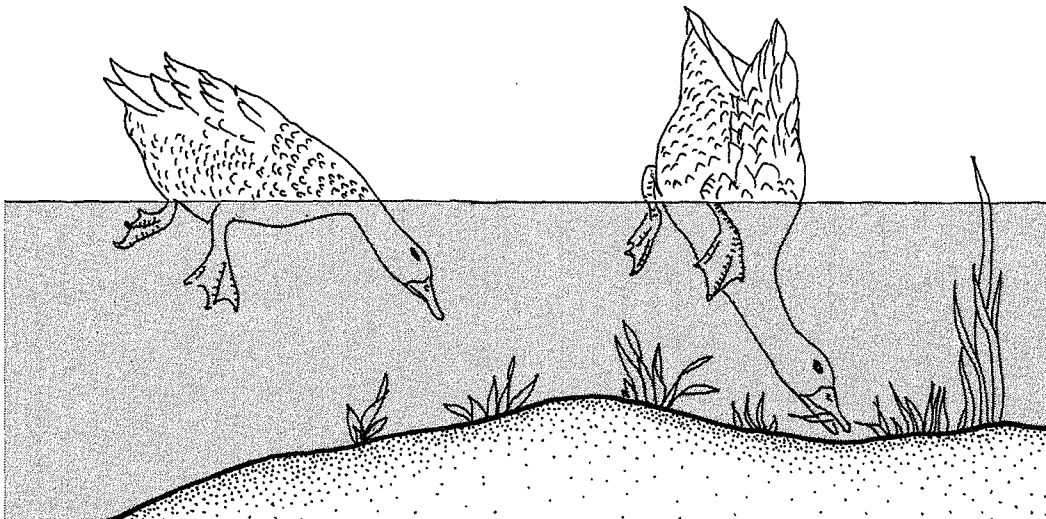
## A place for your ducks to bathe or swim

79. Since ducks are water birds, they will live better and stay healthier if they have water to swim in. Also ducks breed best in water.

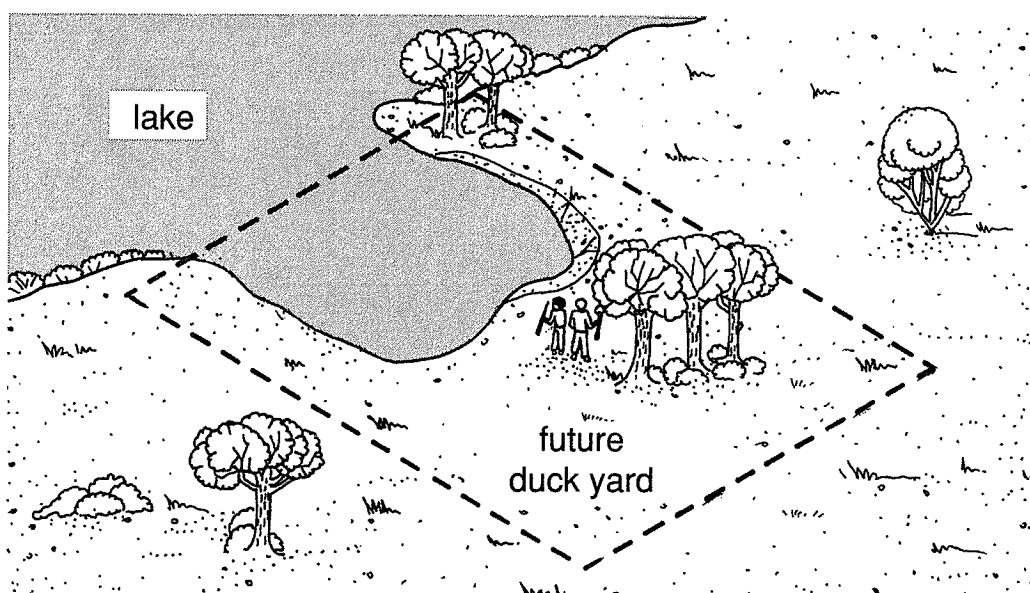
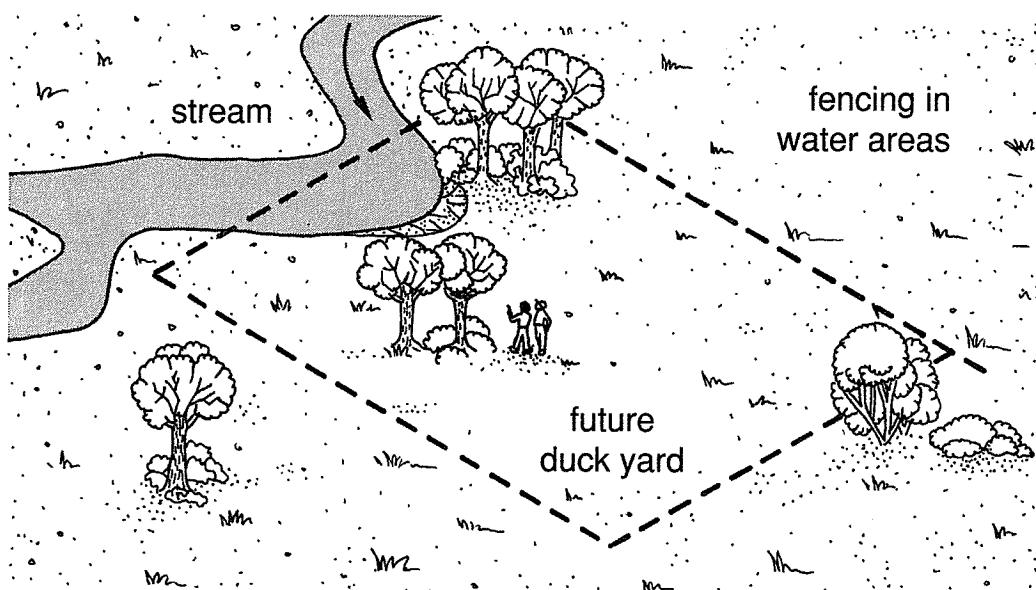


80. In addition, when ducks swim they get a kind of exercise that they do not get on land and they can clean the dust and dirt from their feathers, feet, eyes, bills and nostrils at the same time.

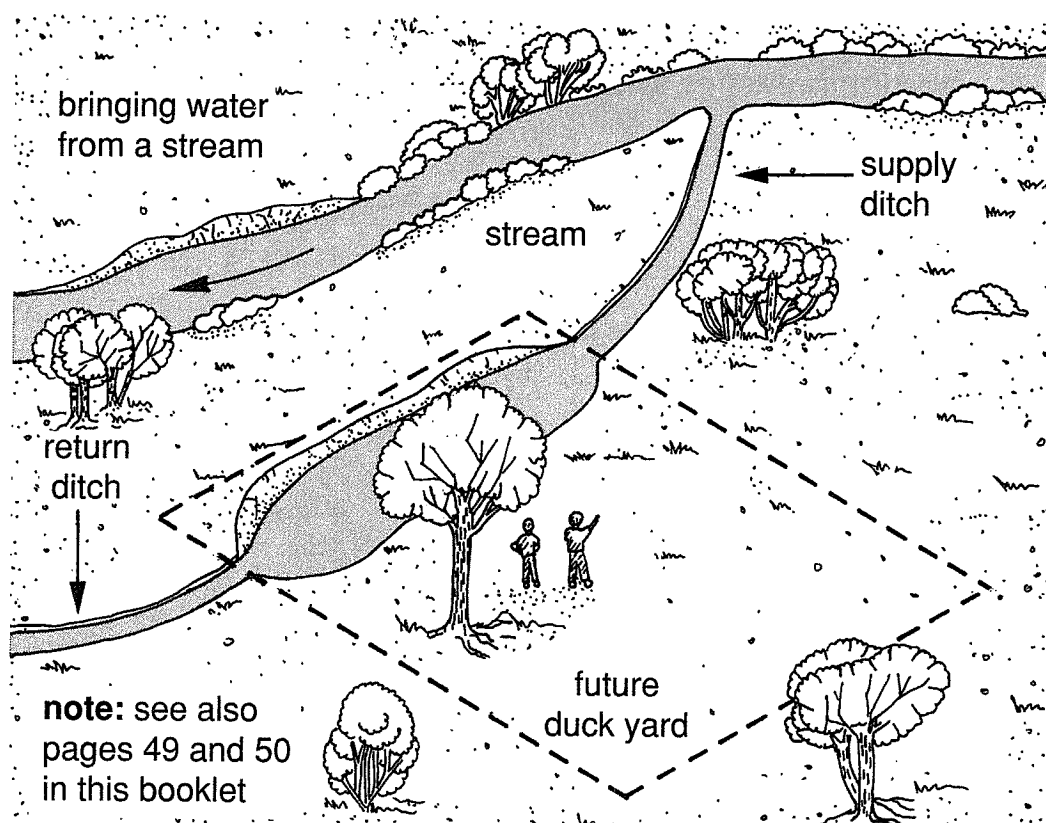
swimming is good exercise  
and keeps ducks clean



81. **Also remember, when your ducks can swim and cool down on hot days they will eat more food and grow better.**
82. If there is a stream, pond or small lake nearby, your ducks can go there to swim when they are outside.



83. If you can put your duck house close enough to a stream, pond or lake, you can enclose a small part of the water within the fence of the duck yard and they can swim there every day.
84. It may also be possible to bring water into your duck yard by digging a water supply ditch from a nearby stream. That way your ducks will have clean, running water all of the time.



85. If you cannot do any of these things and you still wish to give your ducks water for them to swim in, you will have to dig a small pool in the duck yard.

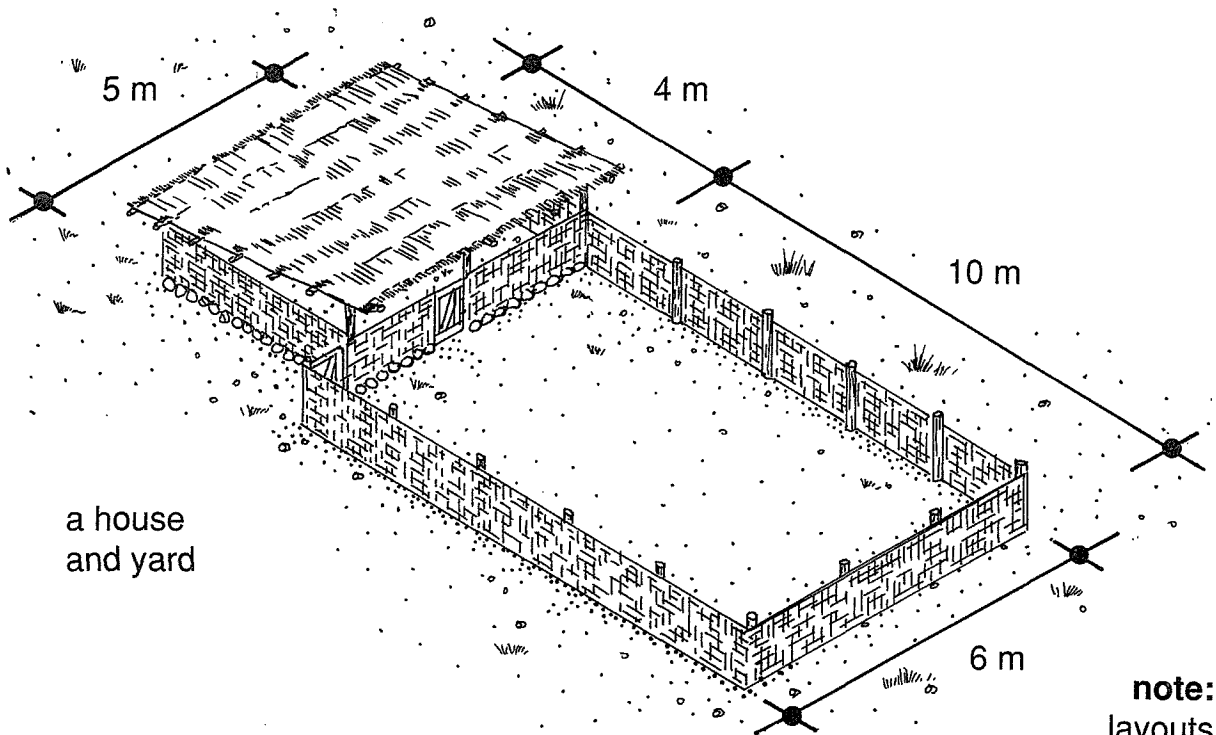
## DUCK HOUSE AND YARD DESIGNS

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86. On the following pages you will be shown how to:

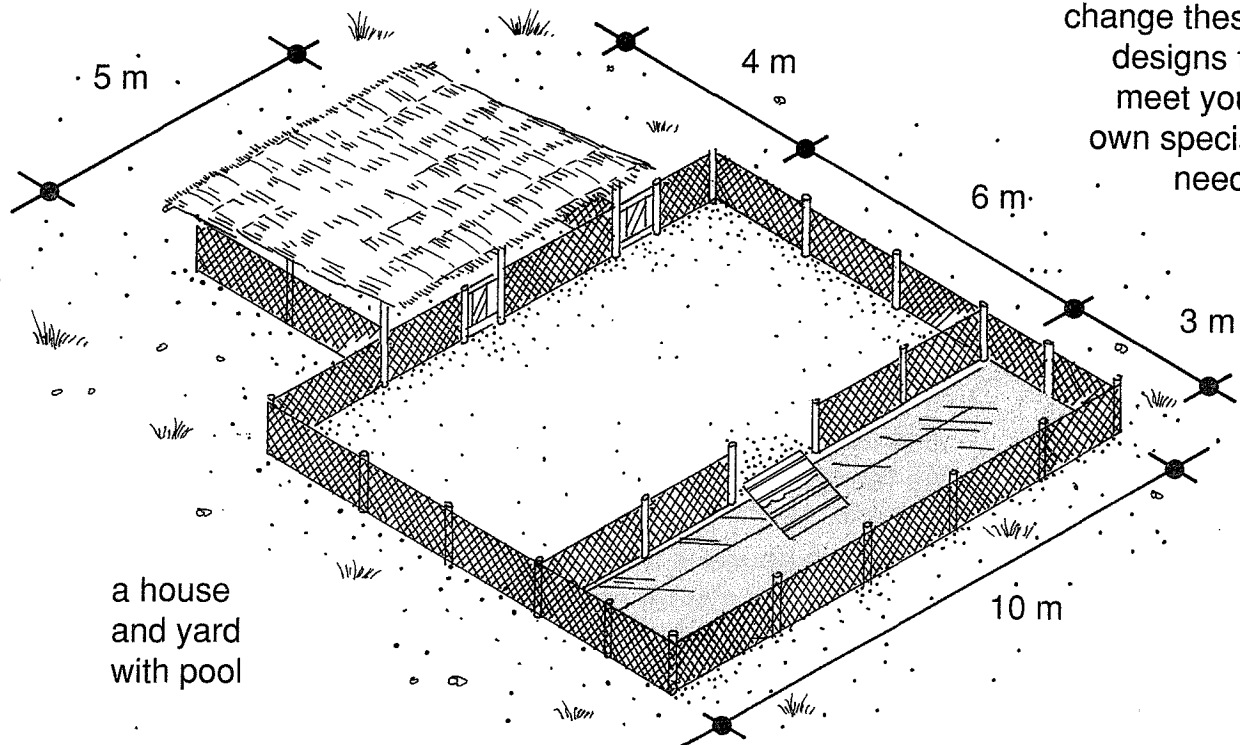
- arrange several kinds of house and yard designs;
- build a house;
- build fences to enclose a yard or part of a stream, pond or lake;
- dig and finish a pool;
- dig a ditch from a stream to bring running water to a yard.

**Several duck house and yard designs with and without a pool**



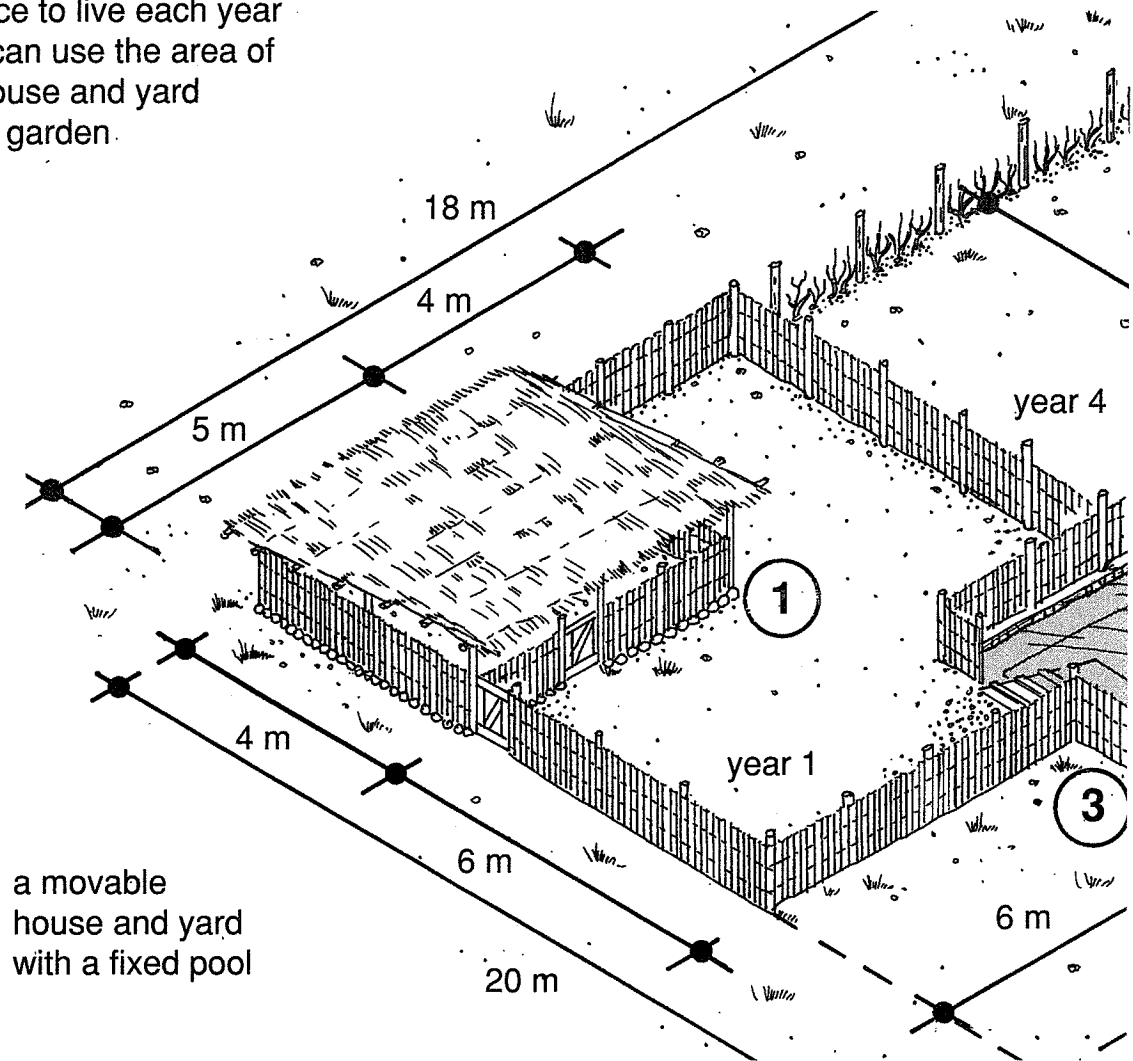
a house  
and yard

**note:**  
layouts  
shown here  
are only three  
ways to arrange duck  
houses, yards and pools.  
You may want to  
change these  
designs to  
meet your  
own special  
needs



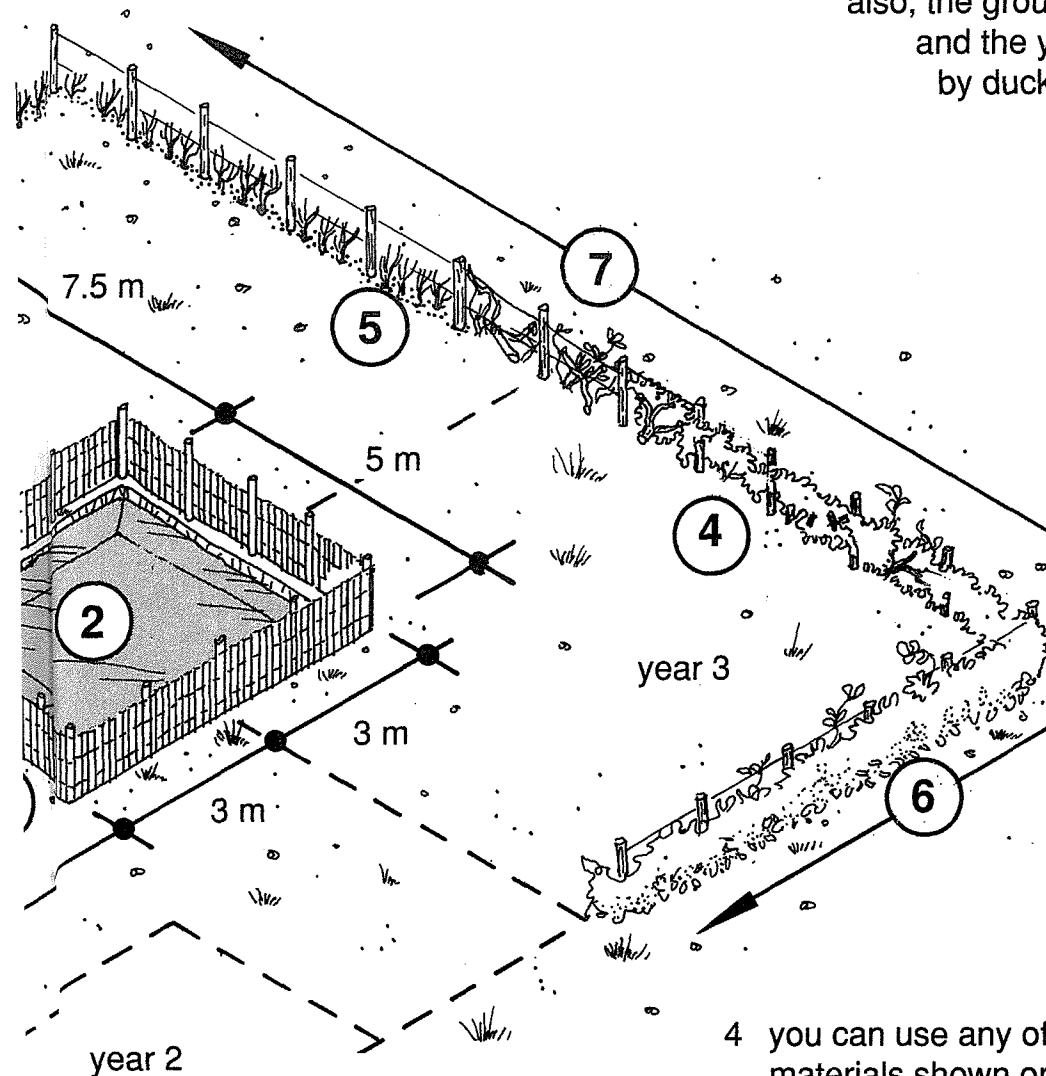
a house  
and yard  
with pool

if you have enough space, you can arrange to move your duck house and yard every year; that way, your ducks will have a clean place to live each year and you can use the area of the old house and yard to plant a garden.



- 1 build the first house and locate the yard as shown above
- 2 the pool is fixed in a central position and serves each year as the house is moved
- 3 when the house is moved, open a section of fence between the new yard and pool, and close the old opening

by moving your house and yard each year,  
dirt and disease will be left behind  
and your ducks will be healthier;  
also, the ground under the house  
and the yard will be fertilized  
by duck droppings and you  
can use the water  
in your garden



4 you can use any of the fencing materials shown on pages 36 and 37; the outside fence above is a living fence like that shown on page 38

5 the plantings in a living fence should be started as soon as possible

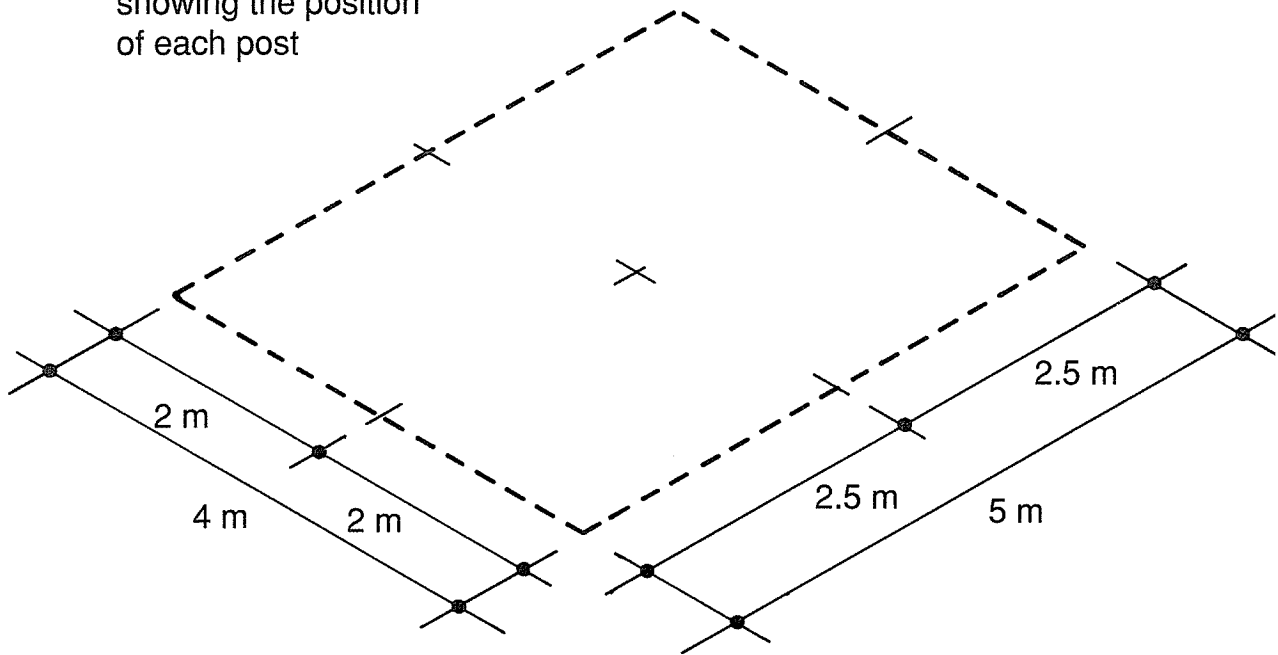
6 build a fence around the entire site as soon as you can

7 when the entire site is completely enclosed, there will be much less work to do each year

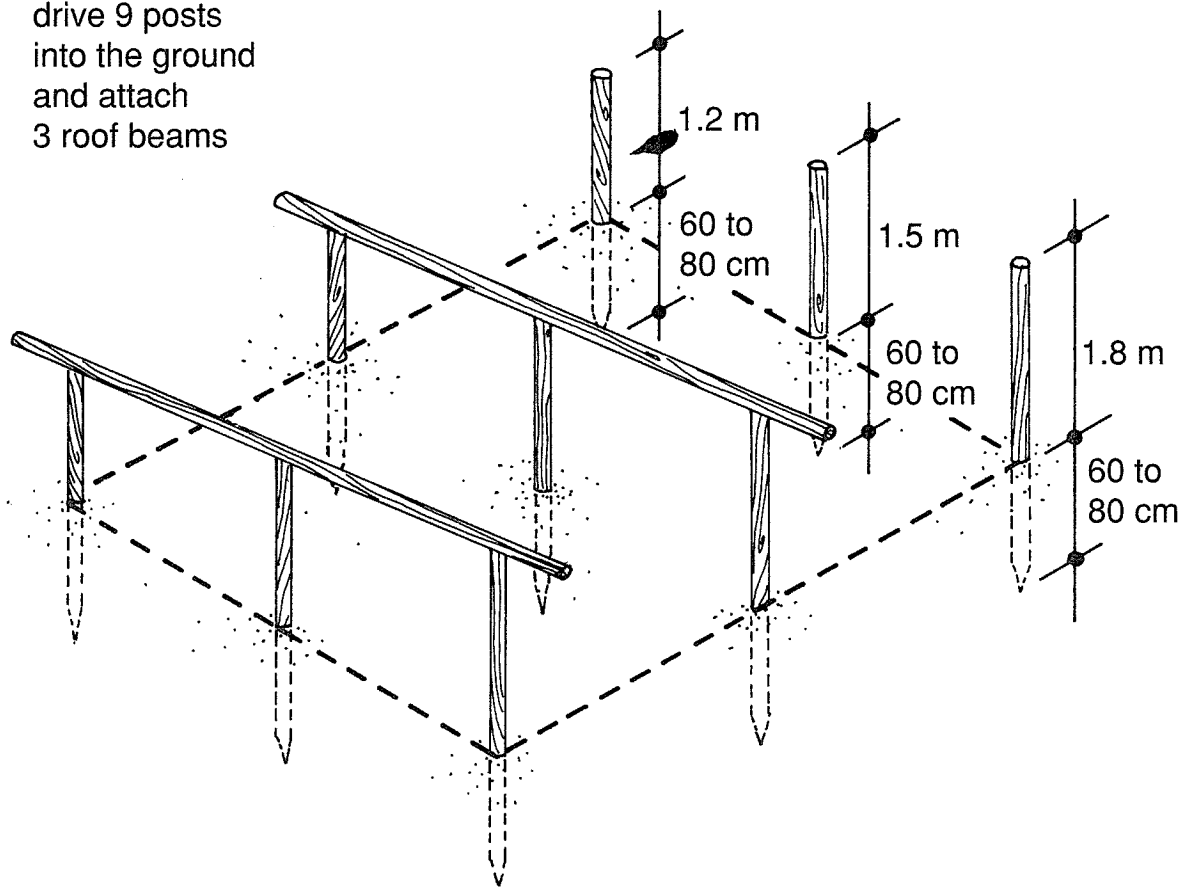


## ***Building a duck house***

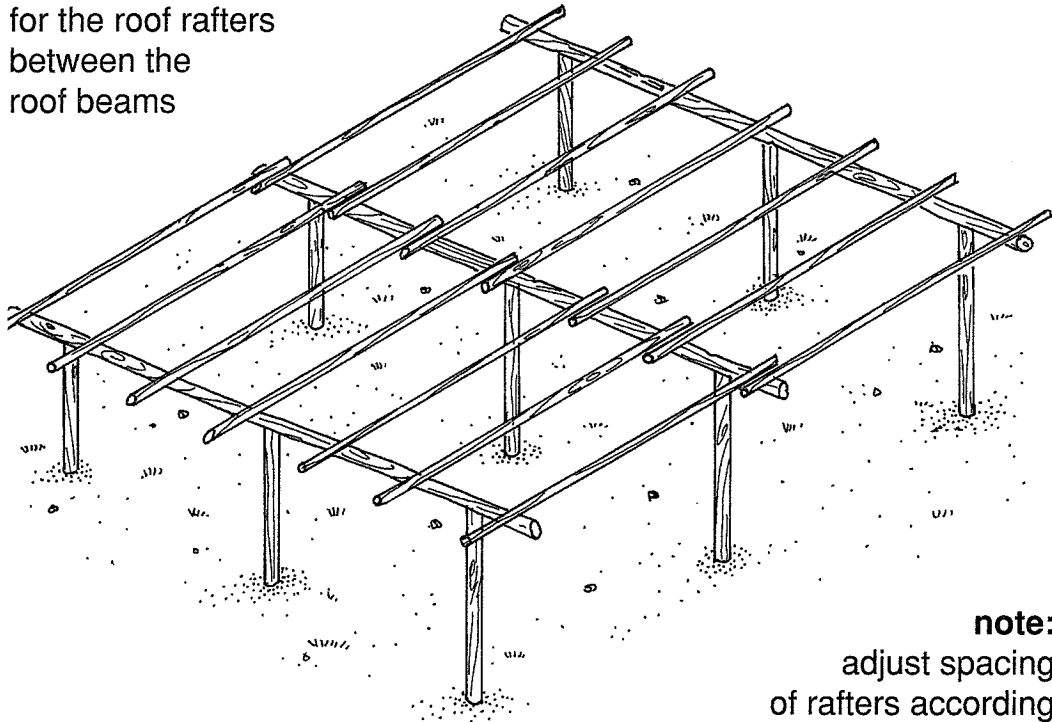
mark the area  
of the duck house  
showing the position  
of each post



drive 9 posts  
into the ground  
and attach  
3 roof beams

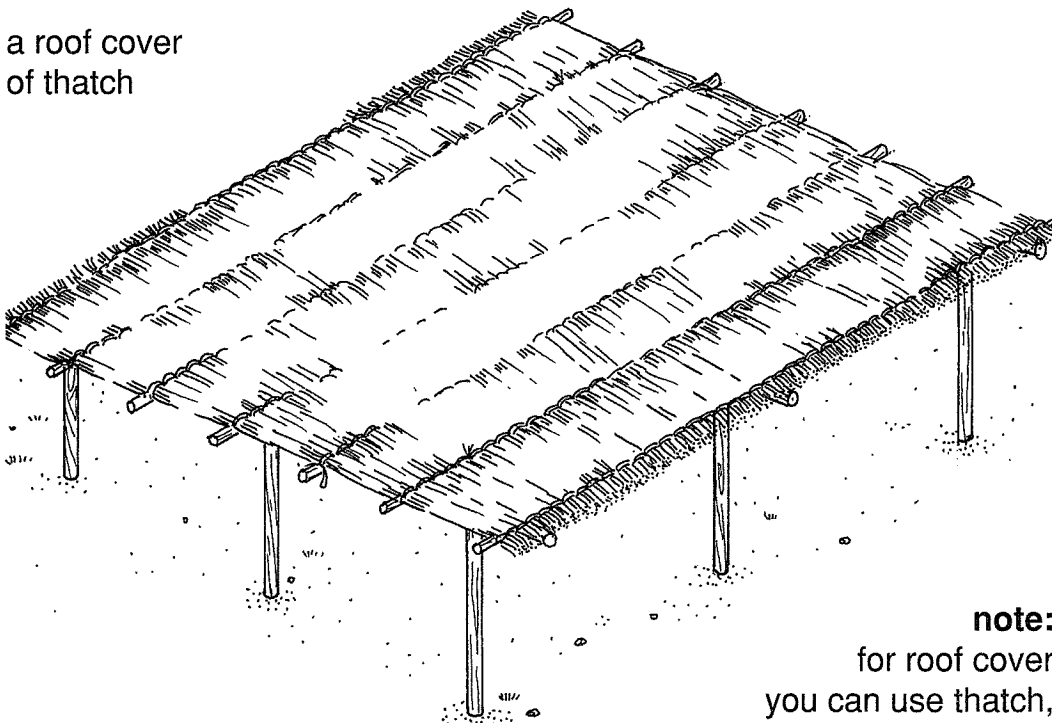


tie or wire  
lightweight poles  
for the roof rafters  
between the  
roof beams



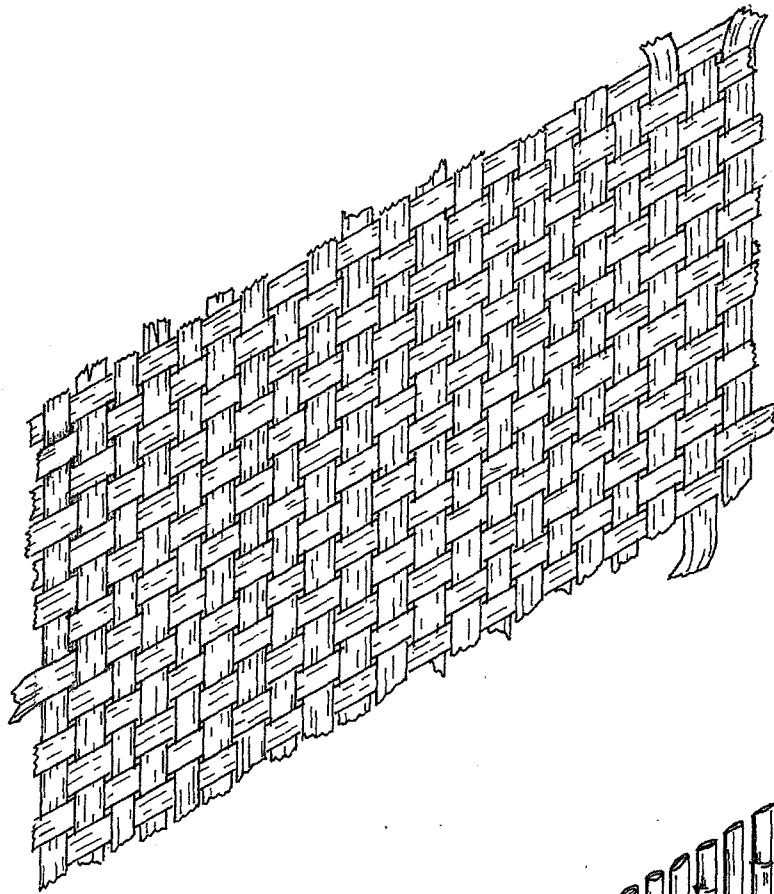
**note:**  
adjust spacing  
of rafters according  
to the strength of  
the roof cover you use

a roof cover  
of thatch

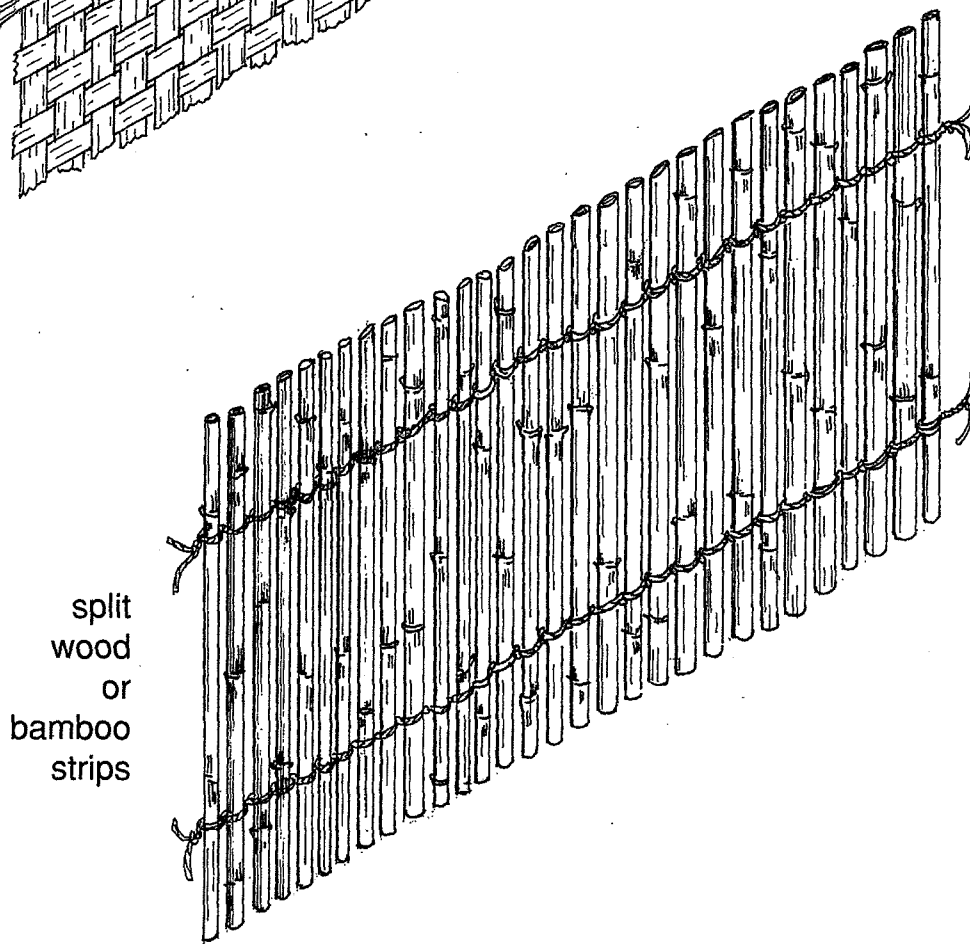


**note:**  
for roof cover  
you can use thatch,  
wood or corrugated metal

***Some materials to use for duck house walls,  
fencing in a yard or pool or enclosing water areas  
within a yard***

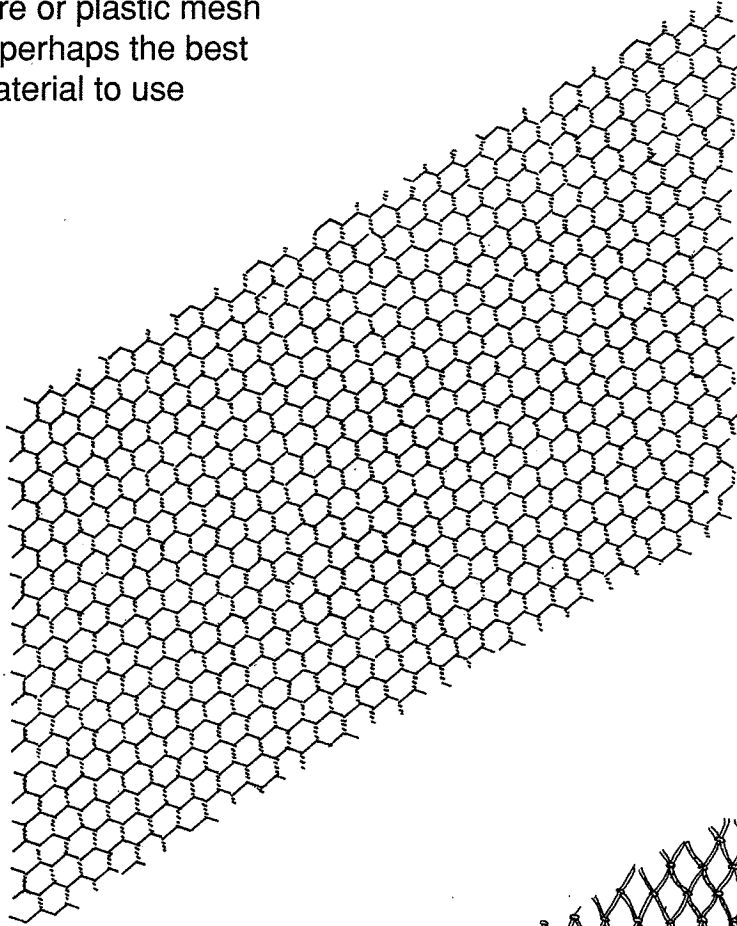


woven  
plant  
material  
or  
bamboo  
strips



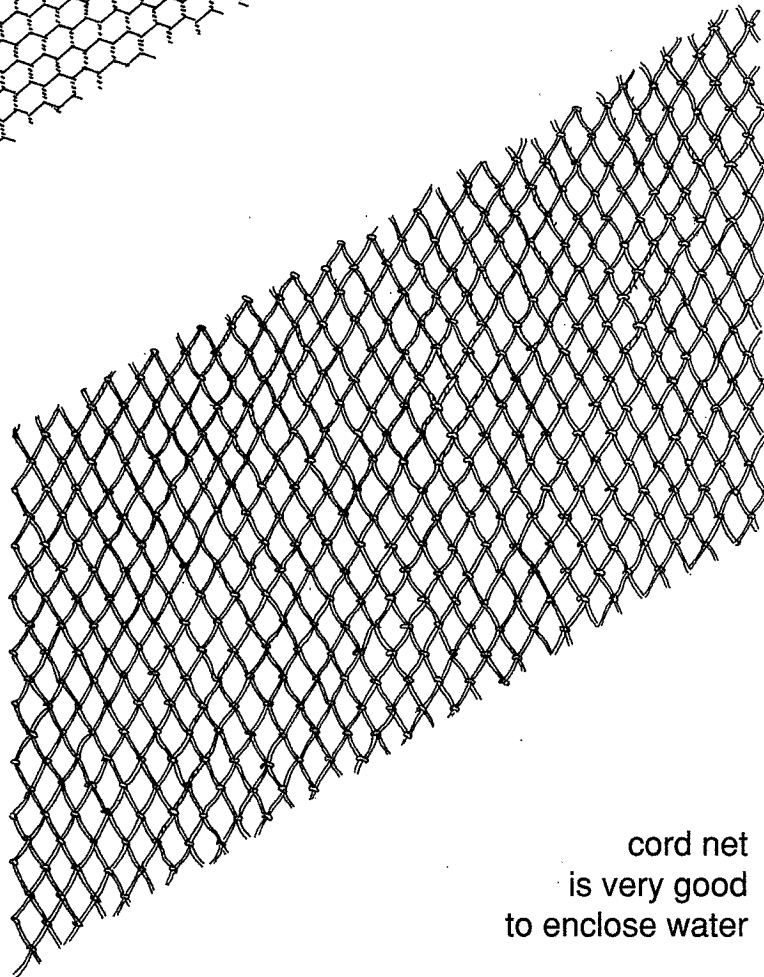
split  
wood  
or  
bamboo  
strips

if it does not cost too much,  
wire or plastic mesh  
is perhaps the best  
material to use



wire  
or  
plastic  
mesh

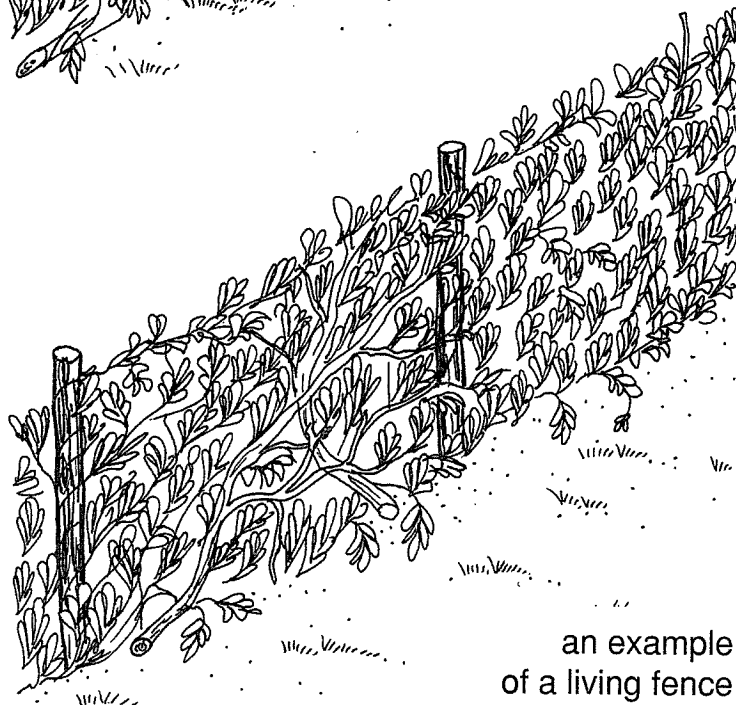
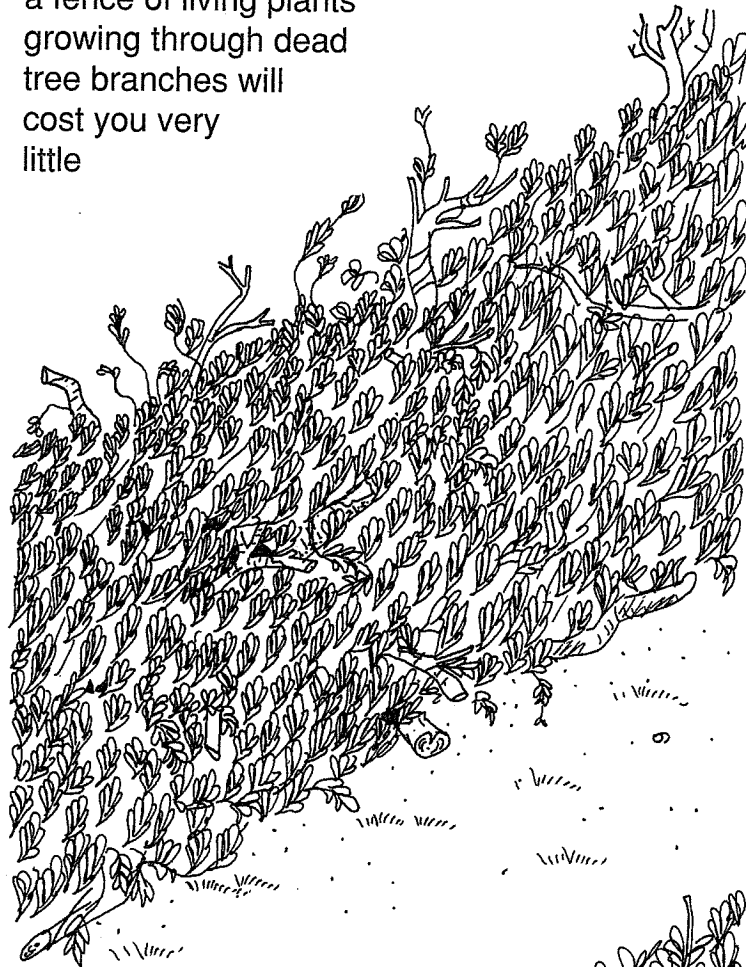
cord  
net



cord net  
is very good  
to enclose water

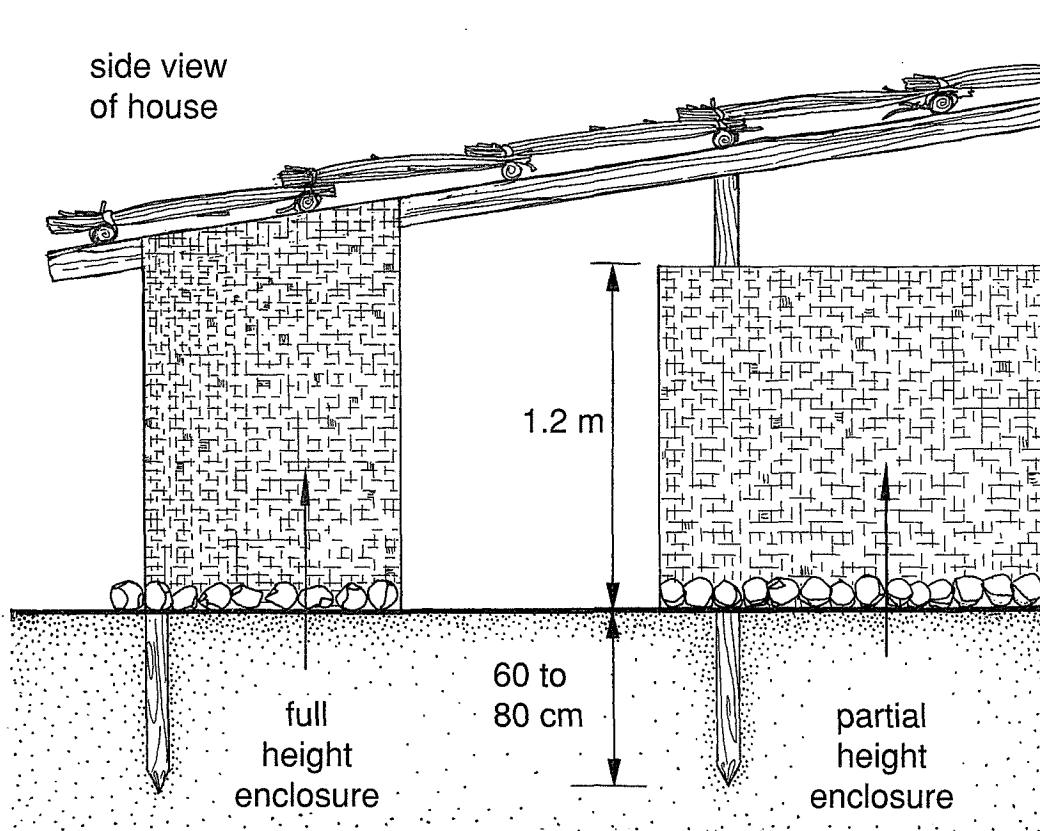
a fence of living plants  
growing through dead  
tree branches will  
cost you very  
little

live  
plants  
and  
dead  
tree  
branches

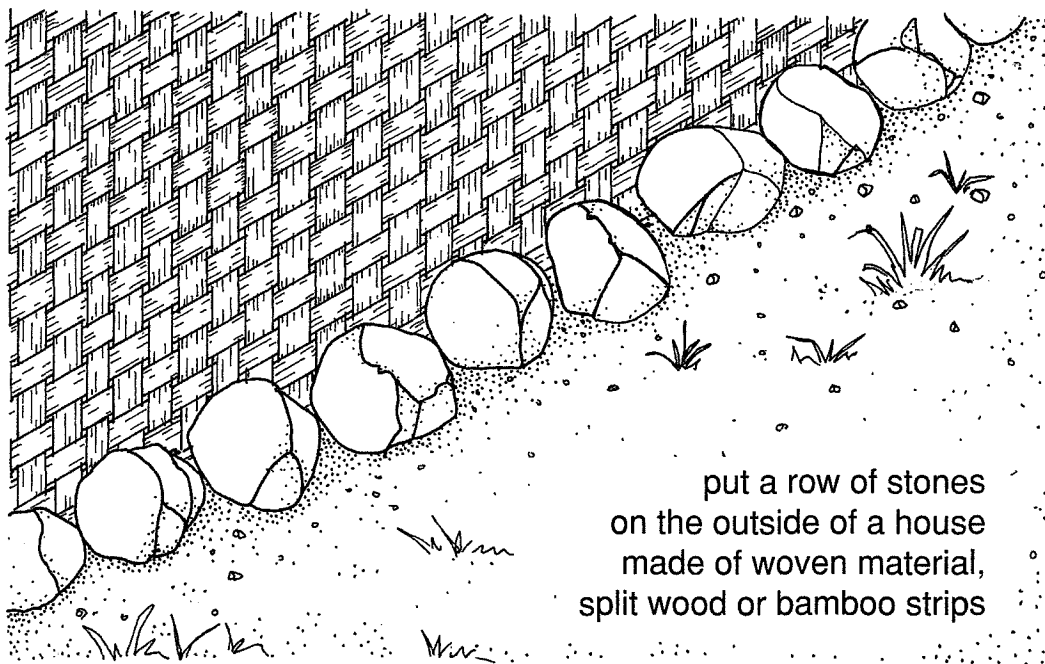


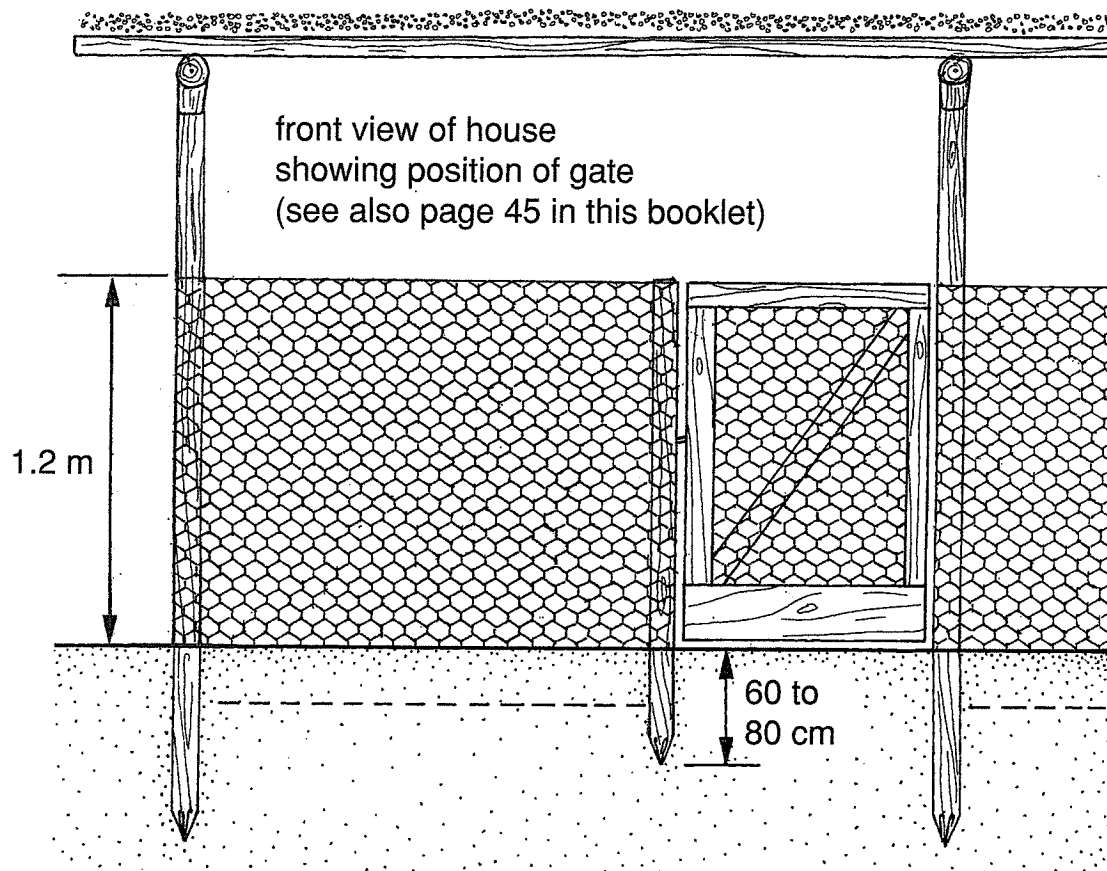
an example  
of a living fence

## Enclosing a duck house

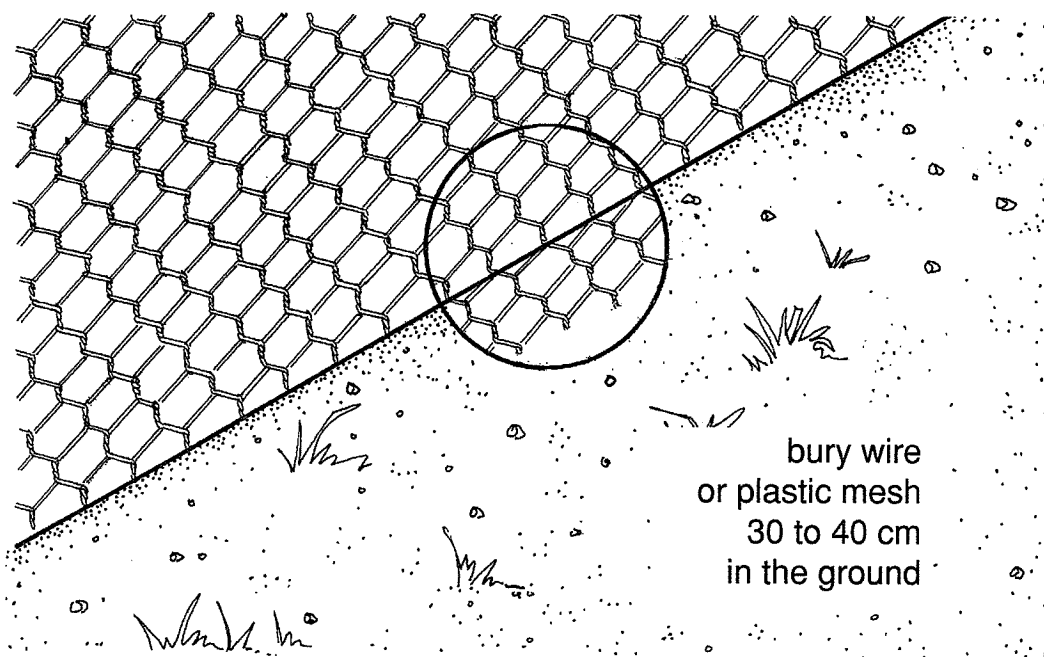


## protection from animals

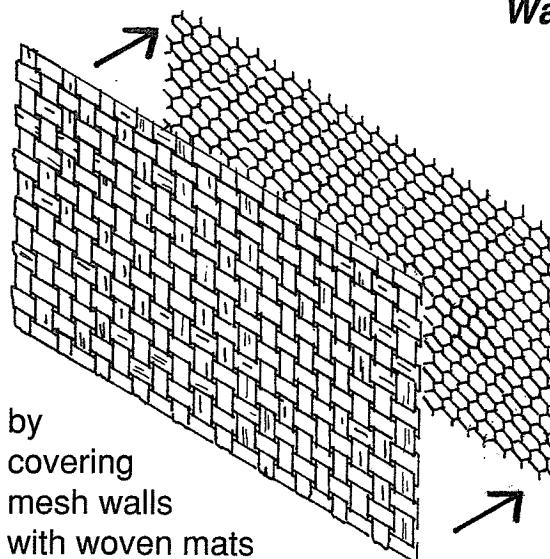




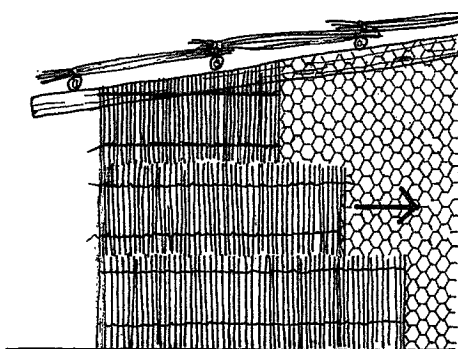
protection from animals



***Ways to protect  
duck houses  
from wind  
and cold***

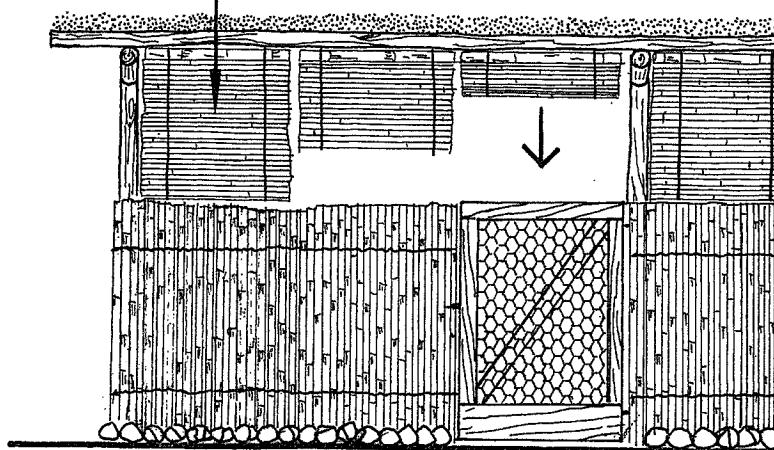


by  
covering  
mesh walls  
with woven mats



by tying  
grass  
or thatch  
to walls

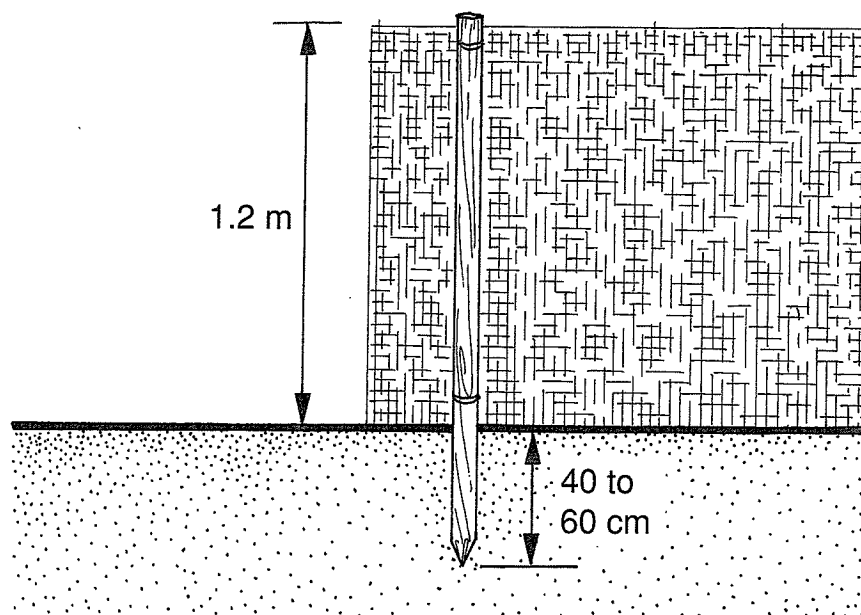
by closing openings  
with split bamboo blinds



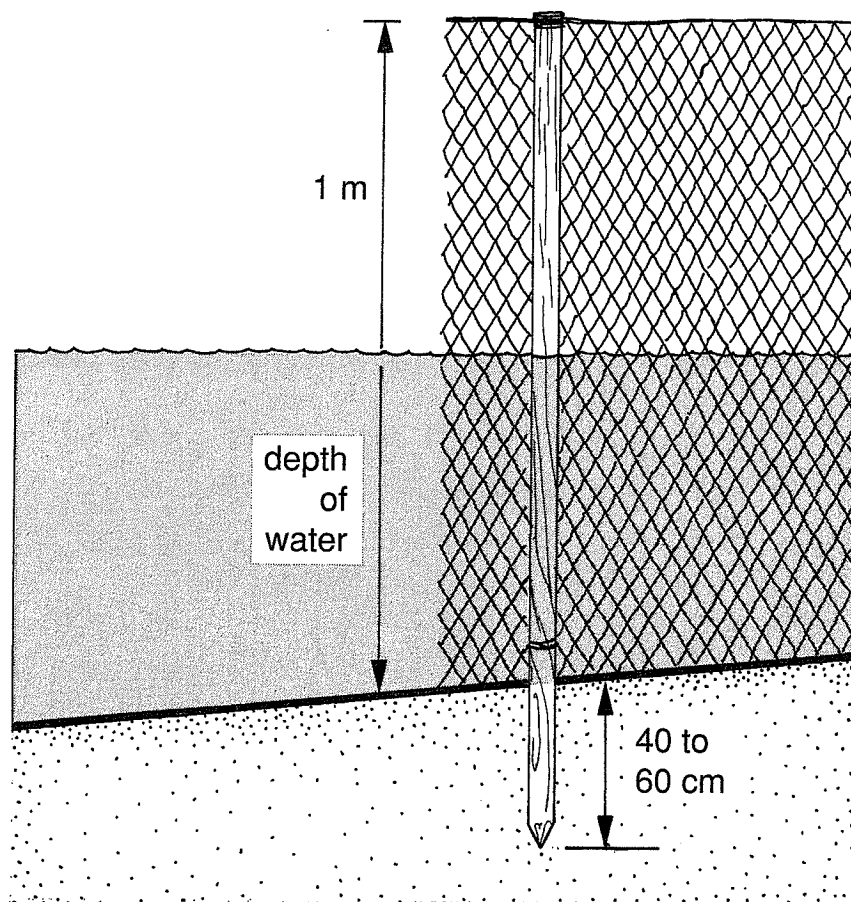


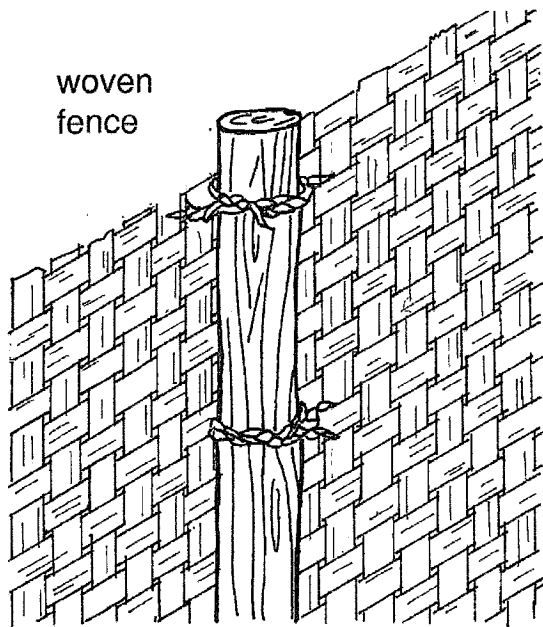
## Building fences

a fence  
for a  
yard



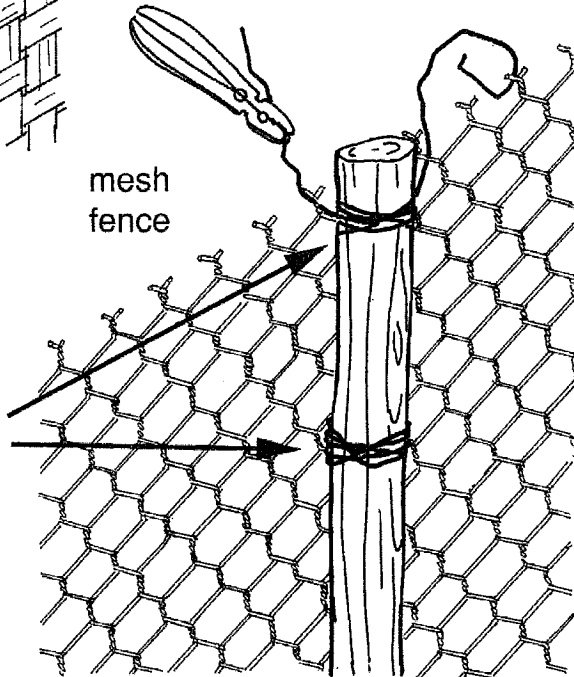
a fence to  
enclose a  
water area





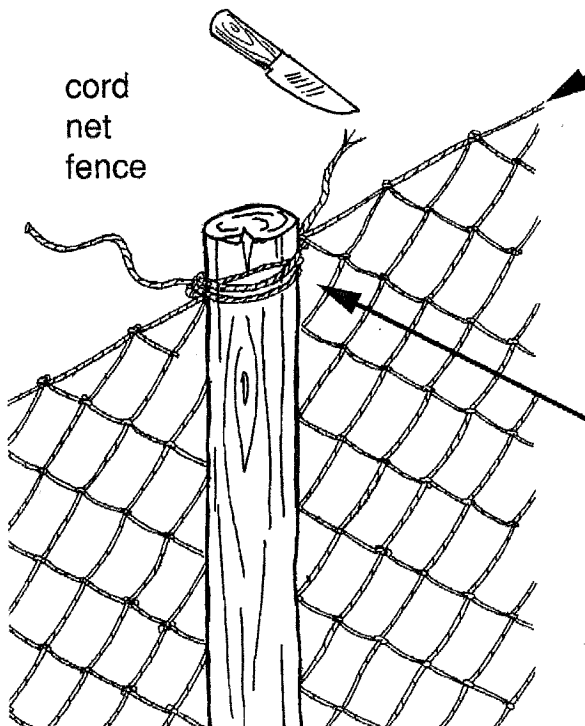
woven  
fence

use cord  
or plant vines  
to tie woven  
material



mesh  
fence

use wire  
to fasten  
mesh

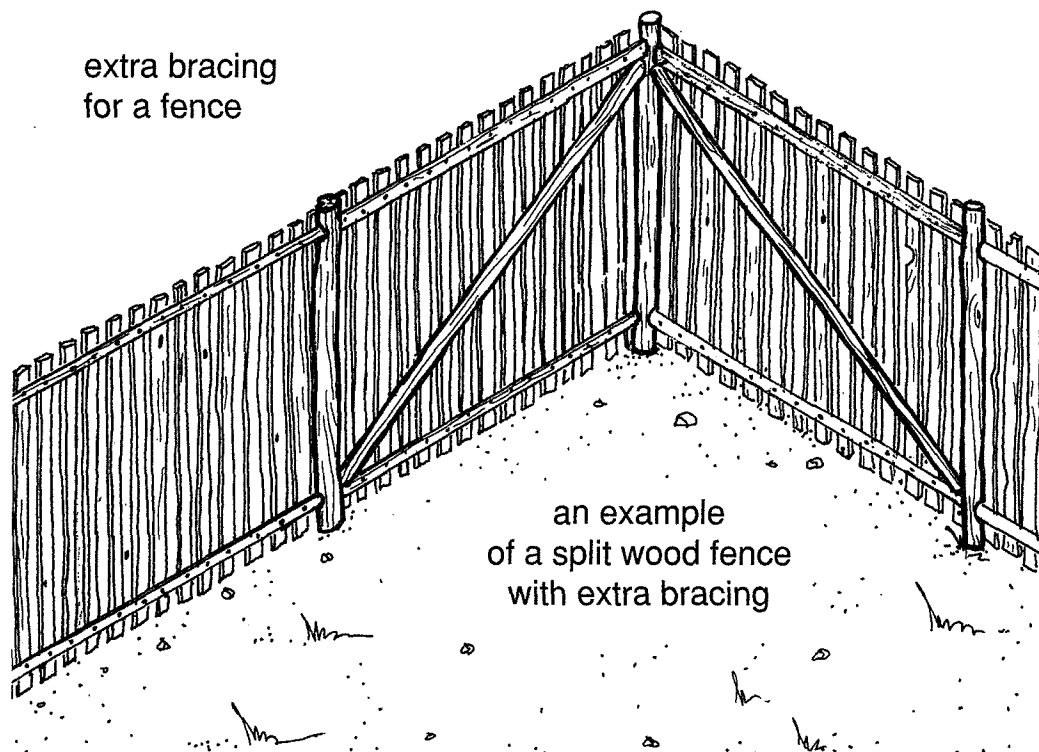
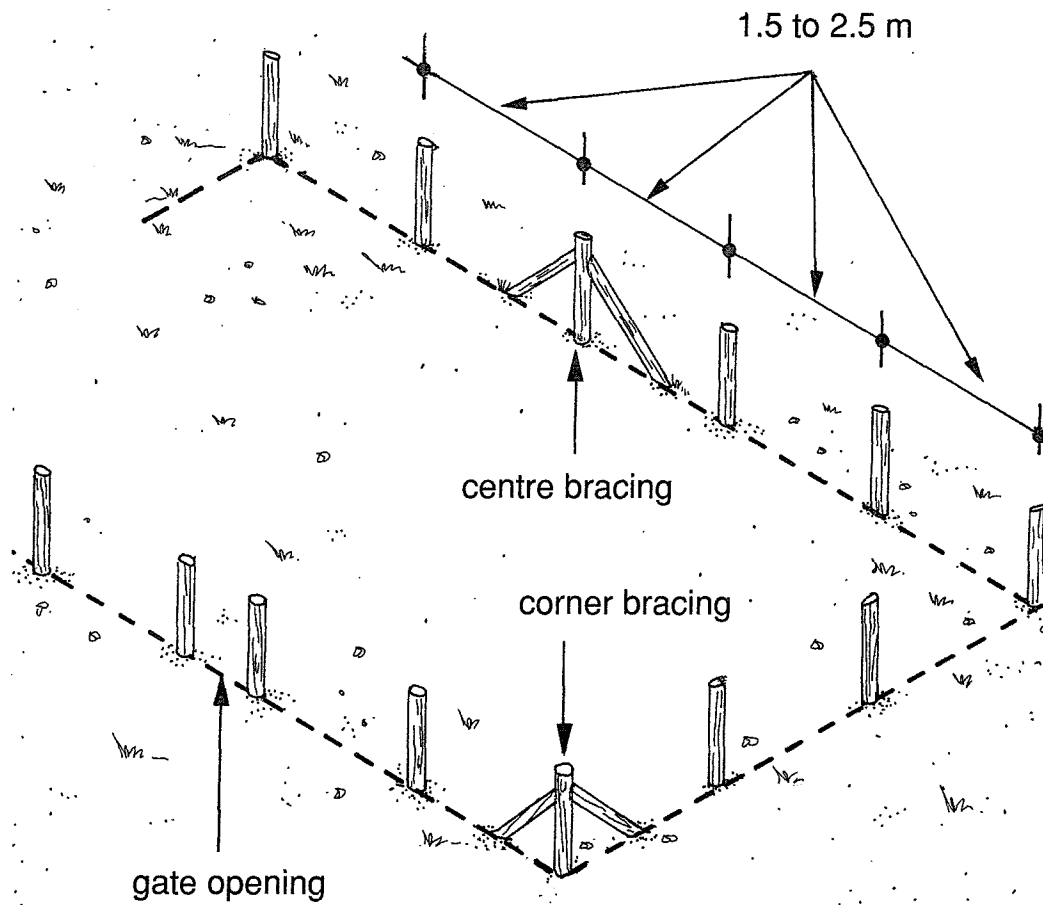


cord  
net  
fence

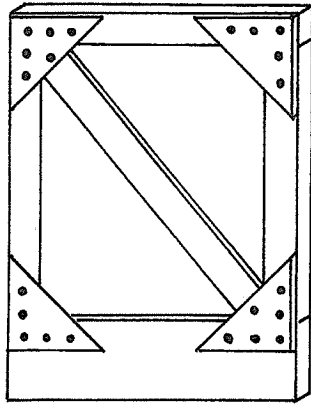
thread net  
through cord  
tied to  
top of posts

use cord  
to tie net

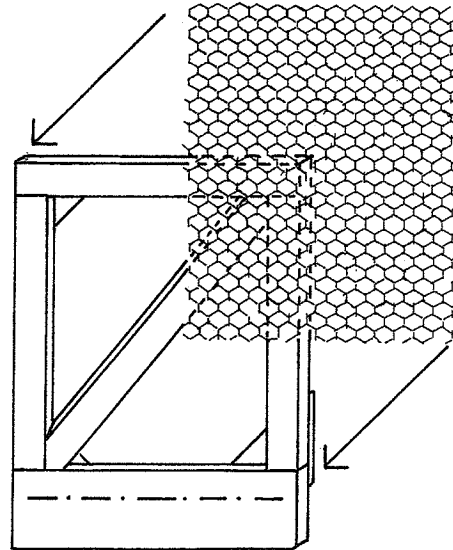
## Laying out a fence



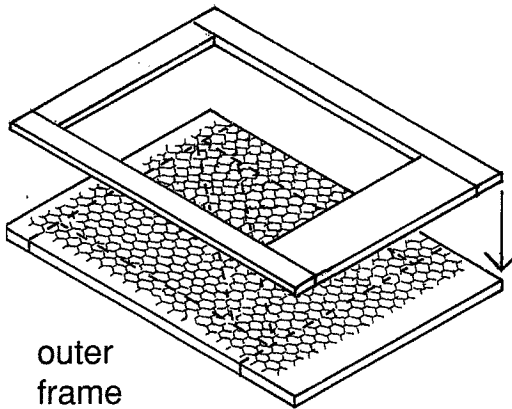
## Building a gate



inner frame

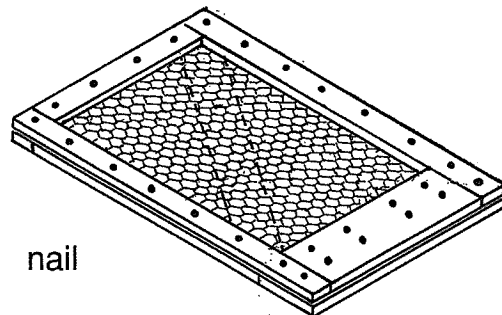


attach mesh

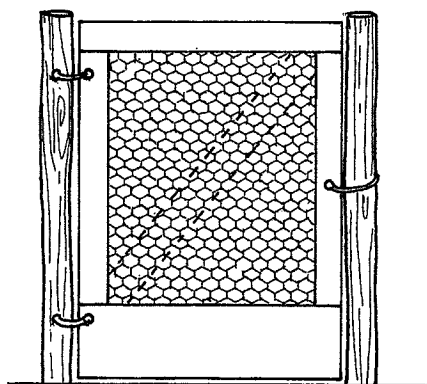


outer frame

**note:** for more complete instructions see also pages 31 to 35 in *Raising ducks 1*

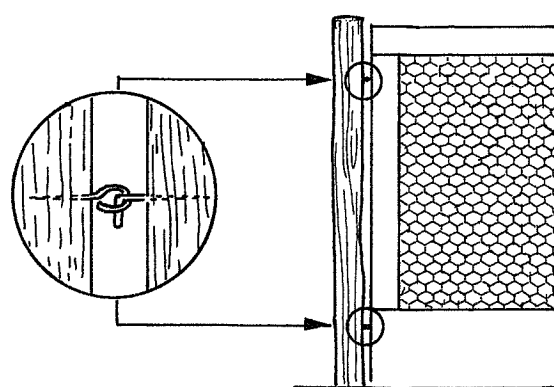


nail



rope hinges  
and door tie

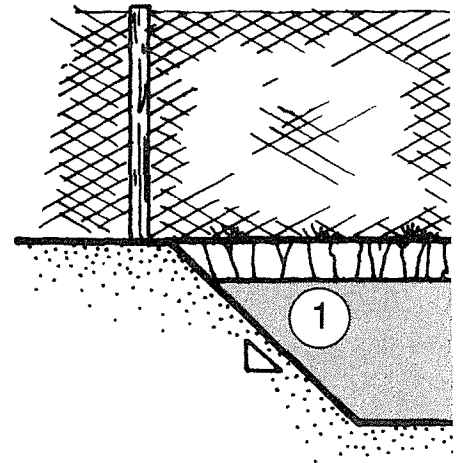
hook and  
eye hinges



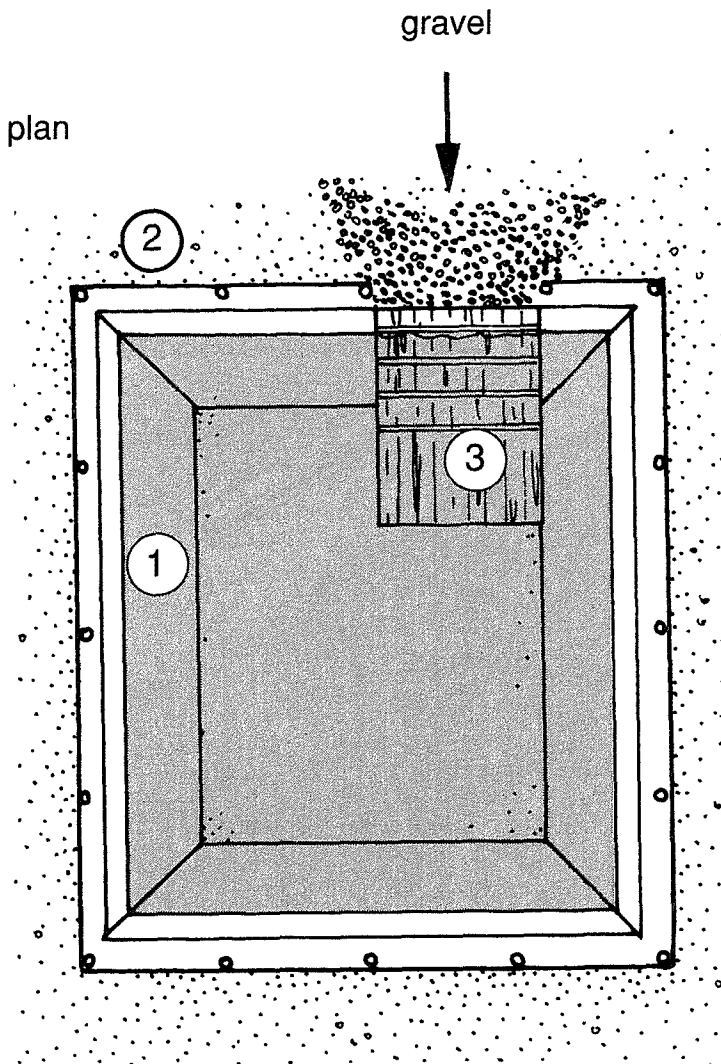
## ***Digging and finishing a pool***

- 1 dig the sides of the pool rather steep (1 to 1) as shown; this will keep the ducks inside so they cannot damage the banks and muddy the water
- 2 a fence around the pool will also keep the ducks inside so they cannot damage the banks
- 3 provide a ramp (3 to 1) as shown, so the ducks will go in and out of the pool at one place only; this will also help protect the banks and keep the water from getting muddy

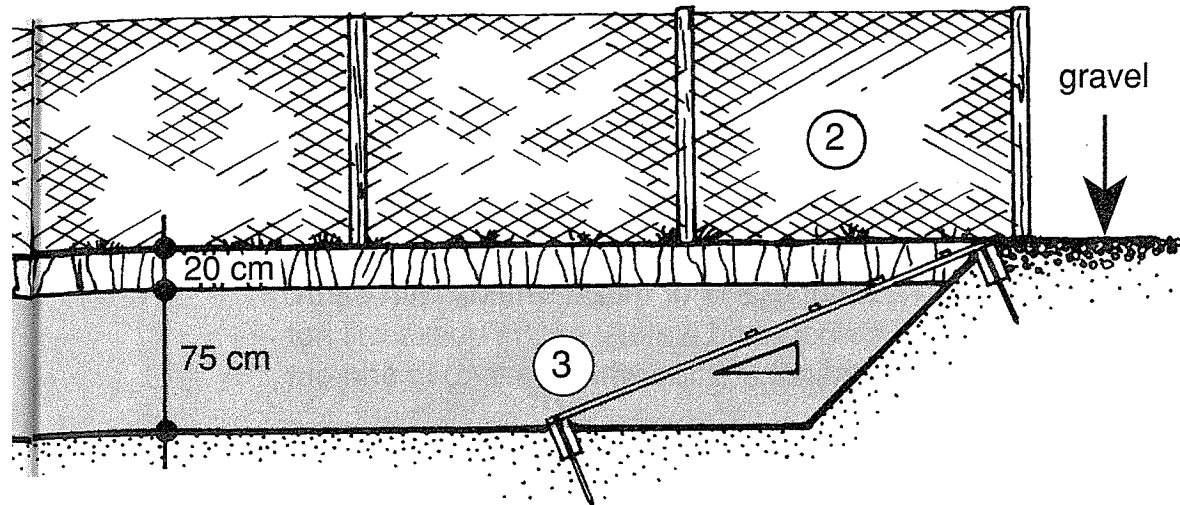
**section**



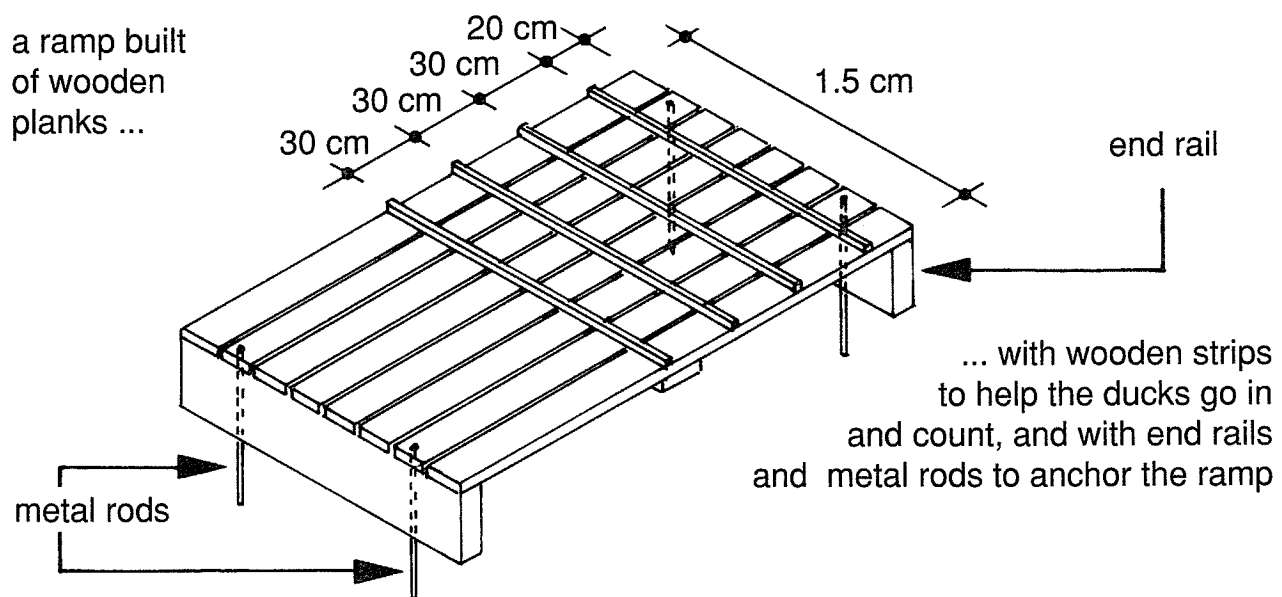
**plan**



remember, you can have a pool only  
if you have enough water to fill it;  
you can use water from a stream or lake,  
from a piped-in water supply, such as a garden hose,  
or even from rain water if there is enough rainfall

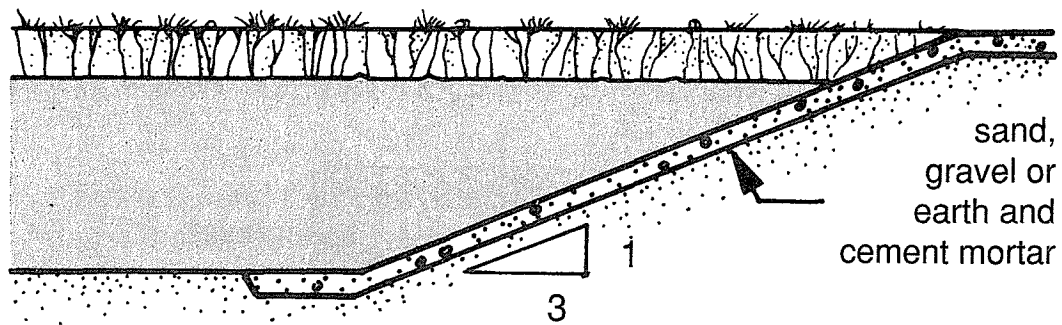


the section above shows a pool 75 cm deep,  
although a pool can be as shallow as 30 cm  
if you do not have enough water for a deeper pool;  
however, the shallower the depth of the water,  
the quicker the pool will get dirty



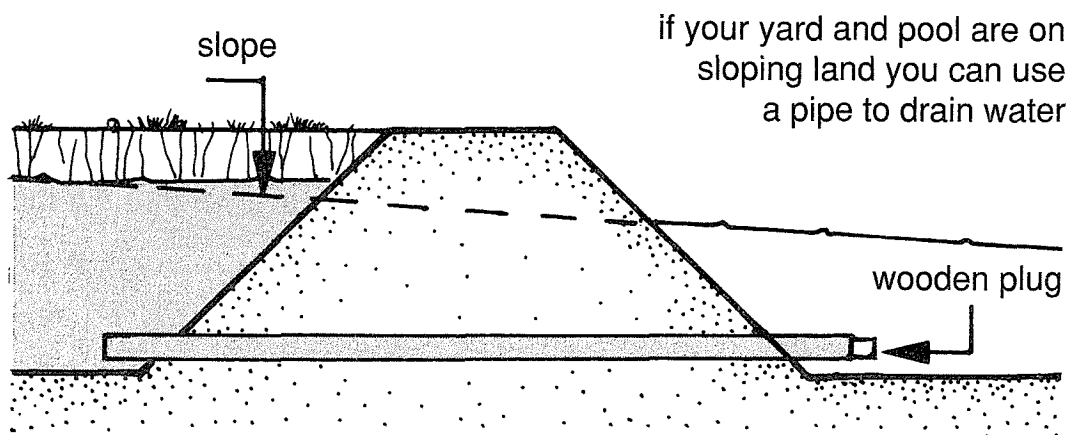
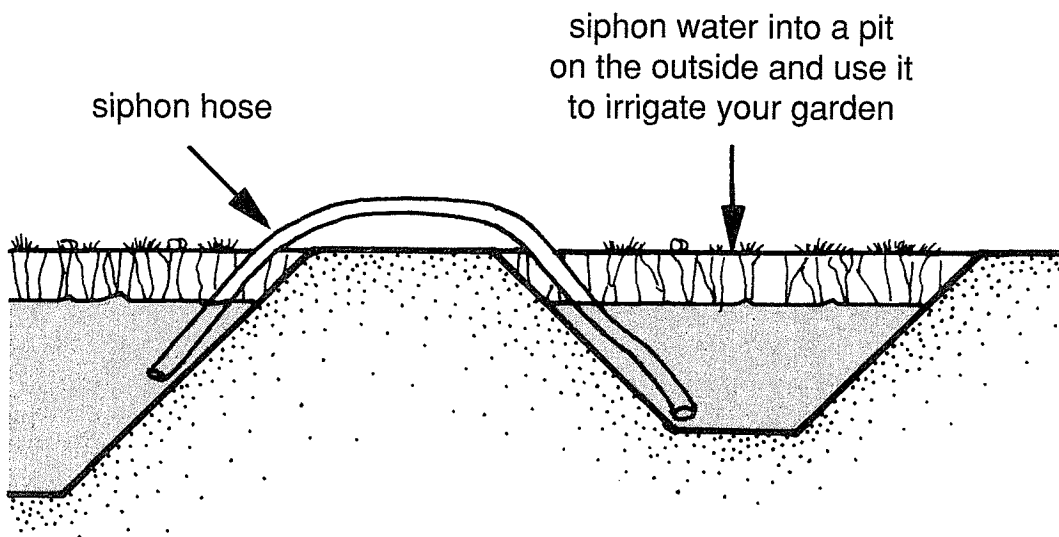
**note:** the length of a ramp will vary  
with pool depth

a ramp can also  
built of earth ...

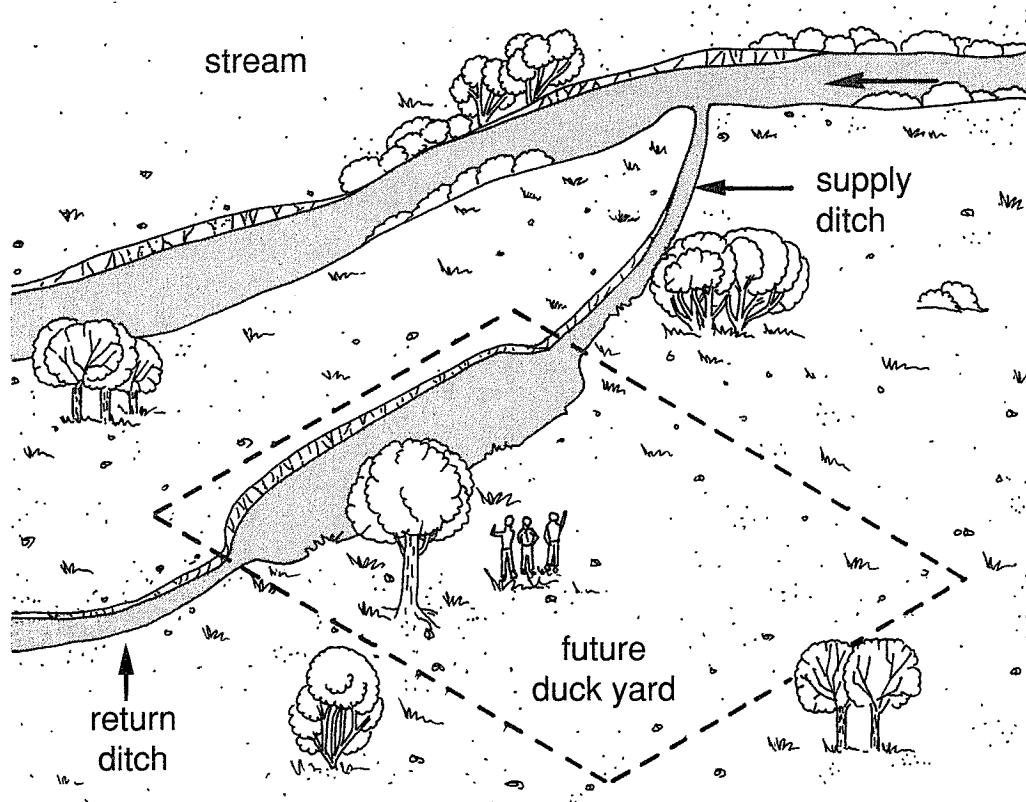


... however, you will have to cover it with  
sand, gravel or mortar (made with earth,  
cement and water), so the ducks will not  
ruin the slope when they go in and out

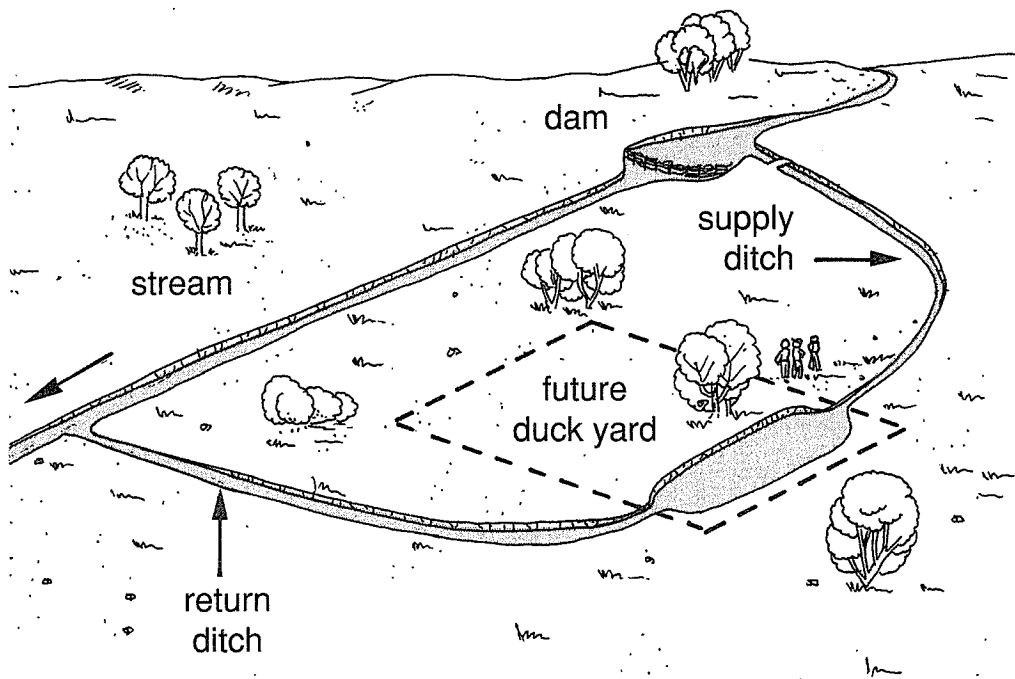
two ways that you can use  
to drain water from a pool



## Bringing water from a stream

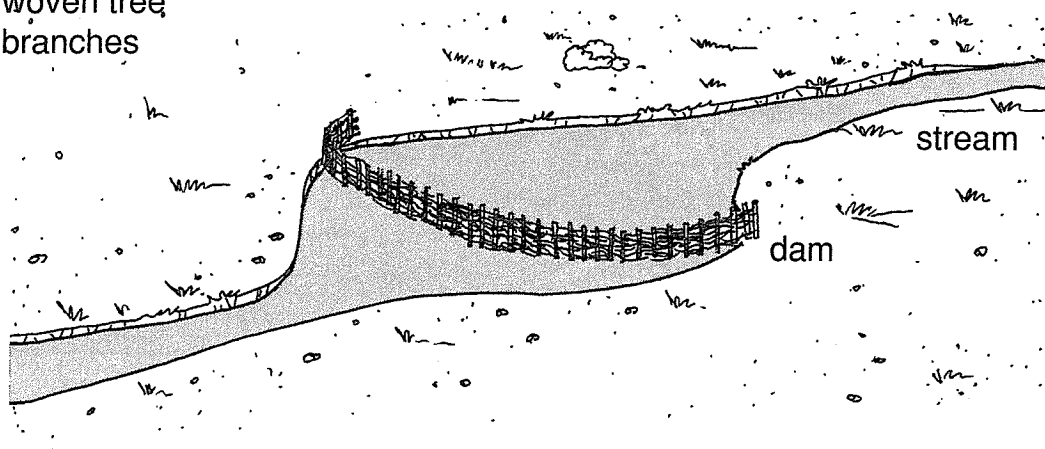


if the slope between the stream and the site is too little, you may have to build a dam to raise the level of the water so that it will flow down to the yard

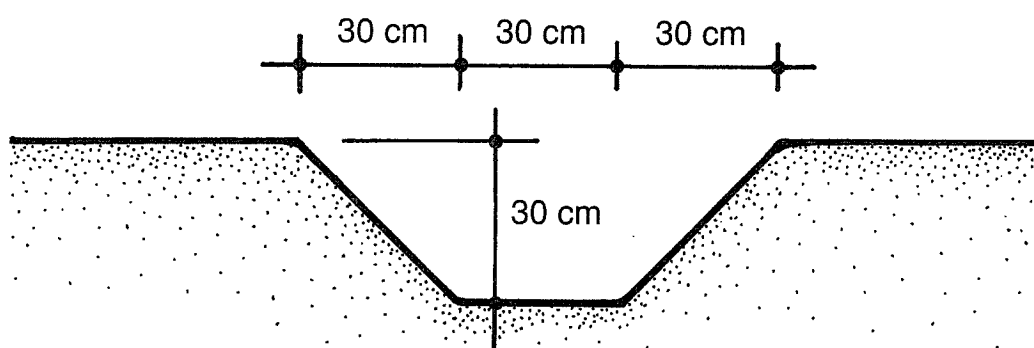




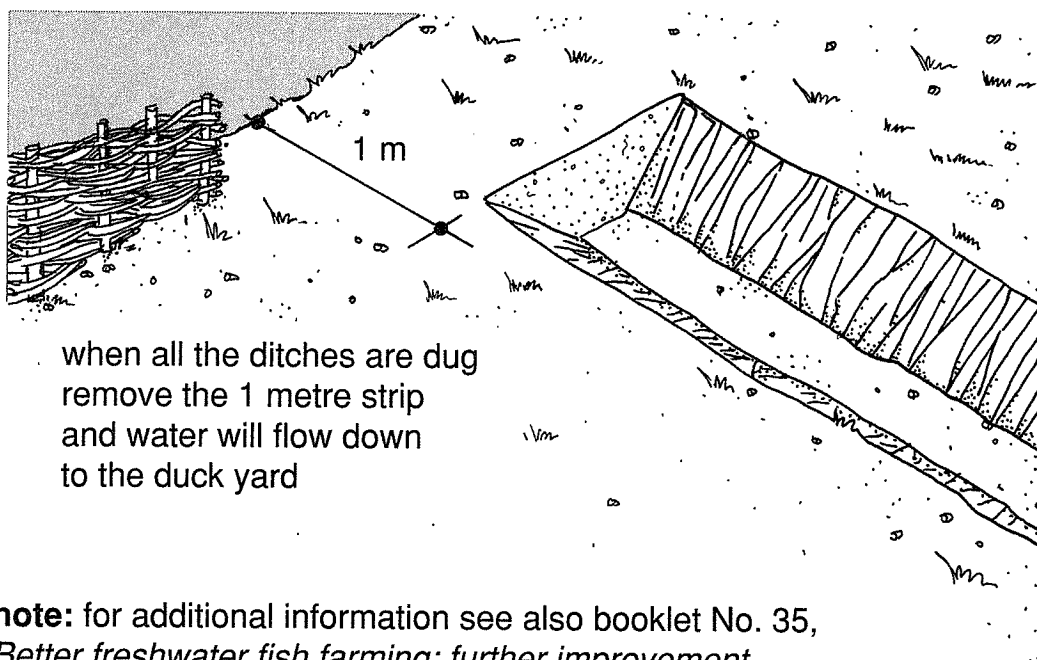
a dam built of  
woven tree  
branches



size for a supply or return ditch



start digging the supply ditch  
about 1 metre away from the stream

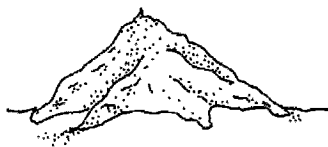


**note:** for additional information see also booklet No. 35,  
*Better freshwater fish farming: further improvement*,  
pages 25 to 35, in the FAO Better Farming Series

## The floor of your new duck house

87. To keep the floor clean and dry and to stop it from getting muddy, cover it with sand or fine gravel, pine needles, wood chips or straw. You can also use harvest waste, such as rice or coffee husks.

sand or fine gravel



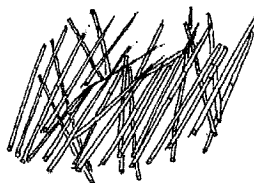
pine needles



wood chips



straw



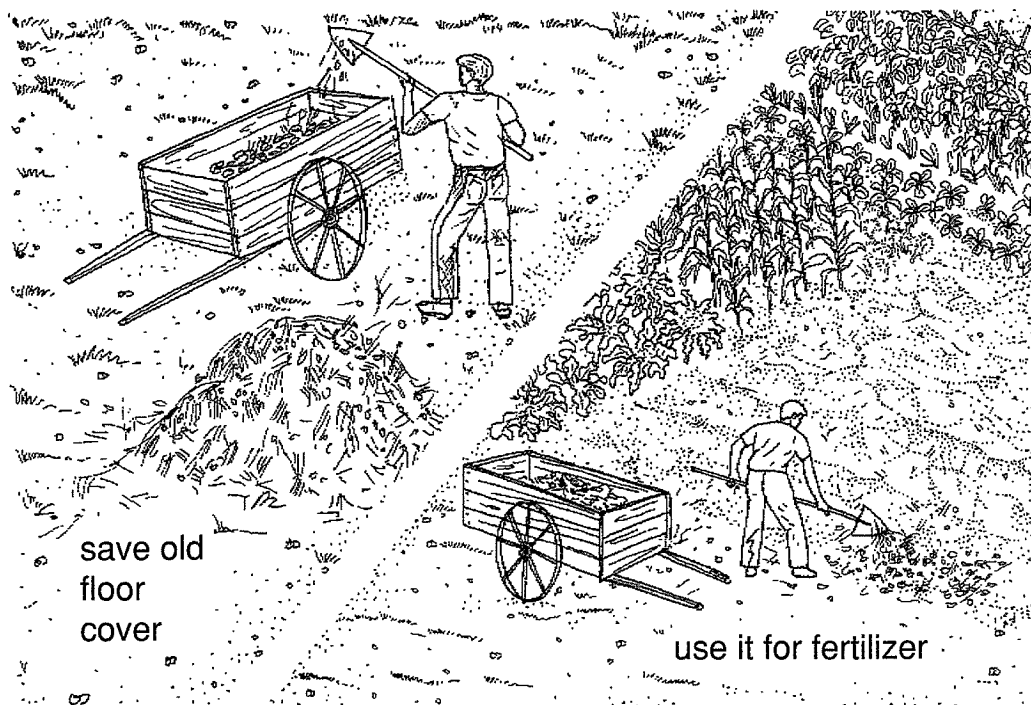
rice husks



88. You already know that a good way to keep your ducks from getting sick is to keep them clean and dry. Ducks that are clean, dry and free from sickness will look good and sell well at the market.
89. **Remember, ducks like to be clean. If your ducks get dirty, they may work so hard trying to clean themselves that they lose weight.**

90. So be sure to check the floor of your duck house every so often. If it is dirty or wet, clean and dry it. This is best done when the ducks are out and you can work more easily.
91. If the covering is sand or fine gravel, rake out any dirt. If there are any wet places, rake the sand or gravel back and forth until it is completely dry.
92. If the covering is a material such as straw or rice husks, rake out any dirty or wet material and replace it with new, dry covering. Also, covering material that becomes packed down and hard should be loosened by raking it back and forth.
93. With a house of 20 square metres it is best to change the floor covering completely every two or three months.

**Note:** When you remove old floor covering, if it is straw, rice or coffee husks, or any other similar material, **do not throw it away. Save it.** You can use it as fertilizer for your garden or your farm fields.

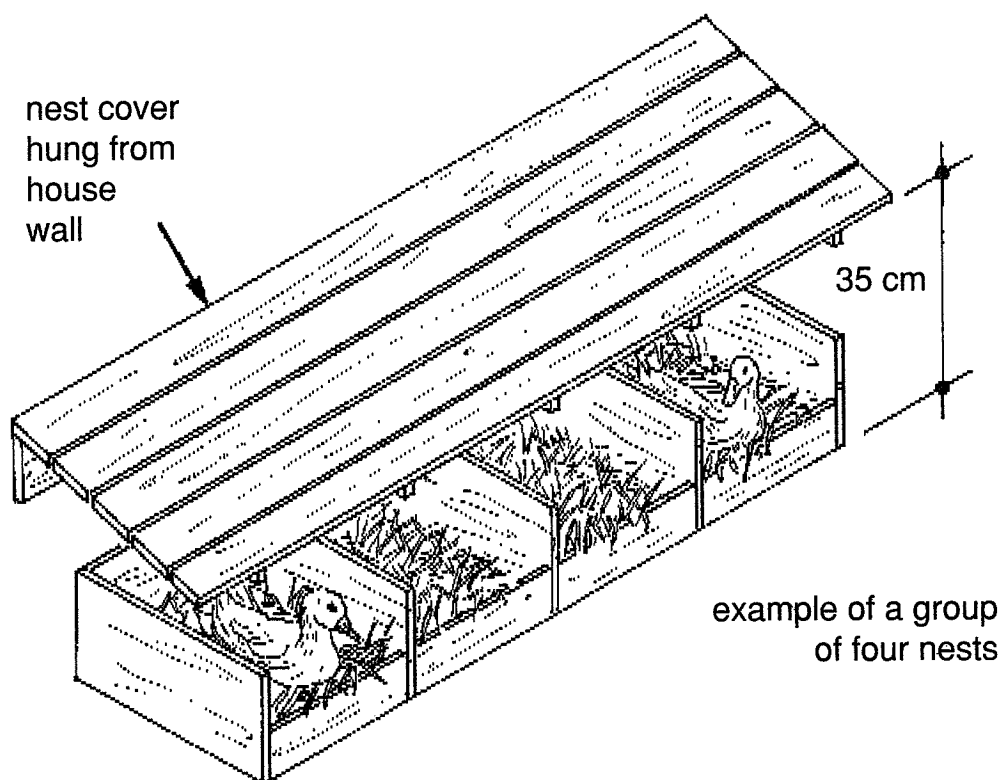
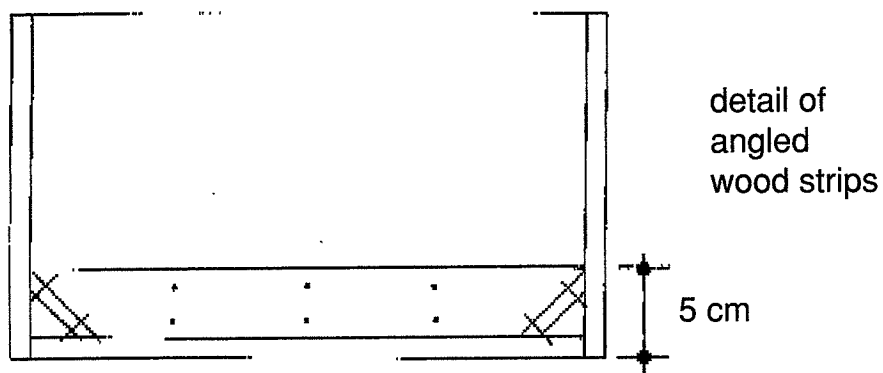
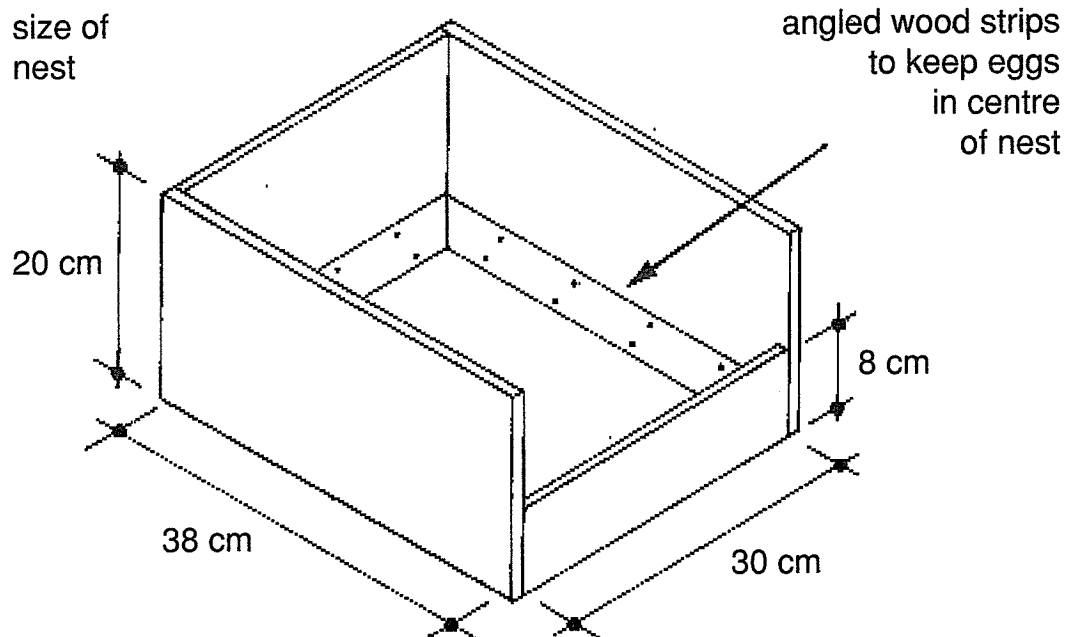


## Nests for a large flock

94. In *Raising ducks 1*, you were told that you would need 1 nest for every 3 female ducks. However, now with many more ducks you will need fewer nests per duck. If you are going to raise ducks for **both meat and eggs** or **only for meat**, you will need 1 nest for every **4 female ducks**. If you are going to raise ducks **only for eggs**, you will need **1 nest** for every **6 female ducks**.
95. Use the same sizes for nests as you did for your small flock. However, when you build new nests be sure to build them in groups as shown on the opposite page. That way you will use less wood than building them one by one.

96. If you cannot get new wood, or if new wood costs too much money, you can use cheaper materials such as old wooden crates or boxes, wood strips or lengths of bamboo (see pages 46 and 47 in *Raising ducks 1*).

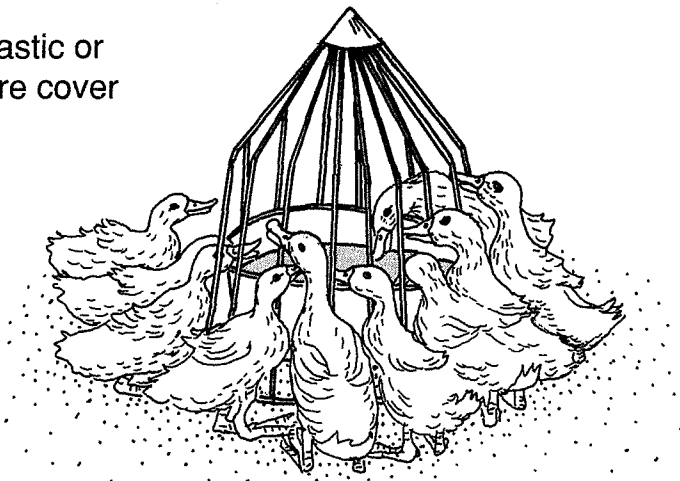
**Note:** Female ducks like their nests better if they have a cover or roof. You can make a simple nest cover using wood or local materials and hang it from the posts of the duck house wall. Be sure to place the nests at the very back of the duck house so that when the females are in their nests they will not be bothered by the males.



## Drinkers for a large flock

97. You know that ducks need drinking water all of the time and that the water should be as clean as you can provide.
98. If you have built a pool, it is certain that your ducks will drink some of their water while they are swimming and water in a pool is often not very clean.
99. So, to be sure that they get the clean water they should have, especially when they are eating, provide drinkers for them in the yard.

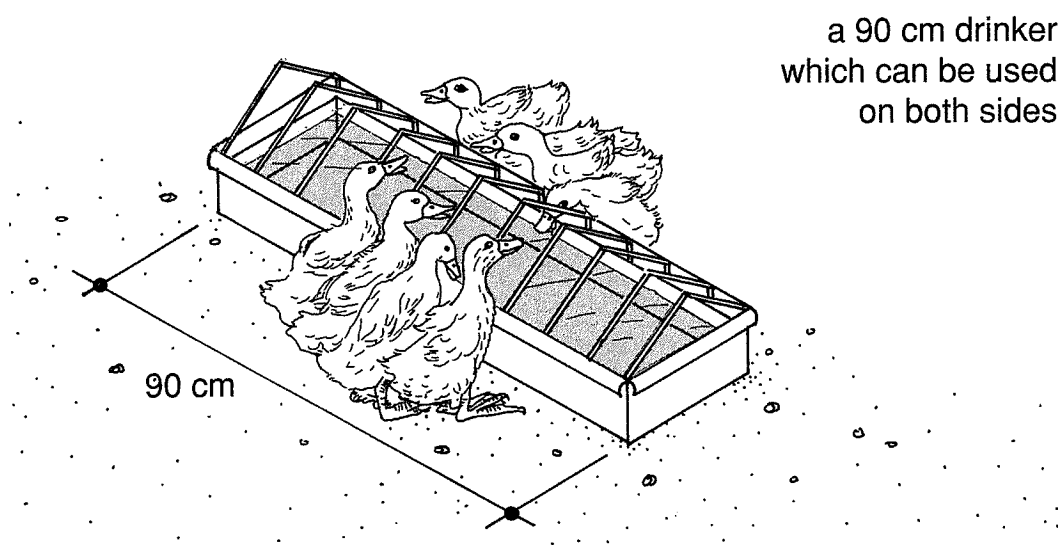
a drinker using a plastic or metal pan with a wire cover  
(see also page 59)



100. If you have not built a pool, you will have to provide enough drinkers so that they get all of the water that they need.
101. To give you an idea how much water is needed, a 7-week-old duck drinks about 1.5 litres of water daily. So, with 60 ducks you will need about 90 litres each day.

102. In addition, to give you an idea how many drinkers you will need, plan for about 3 cm of space for each fully grown duck. So, with 60 ducks you will need about 1.8 metres of drinking space.

103. So if the drinkers that you are going to use measure 90 cm on each side, and ducks can drink from both sides, you will need 1 drinker.



104. Here are some other things that you should know:

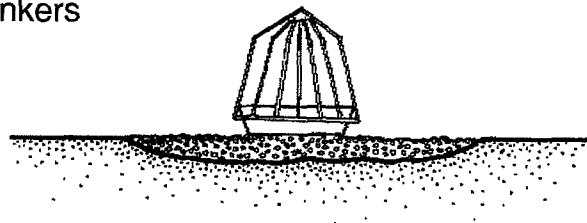
- drinkers should be protected so ducks cannot get into them (otherwise the water may become dirty and bad for your ducks);
- the water should be deep enough so that the ducks can dip their bills, nostrils and eyes in the water (this is especially important if they do not have a pool);
- change the water completely several times a week to keep it clean;
- when your ducks are out of their yard, and there is no water for them nearby, you will have to provide drinkers there as well.



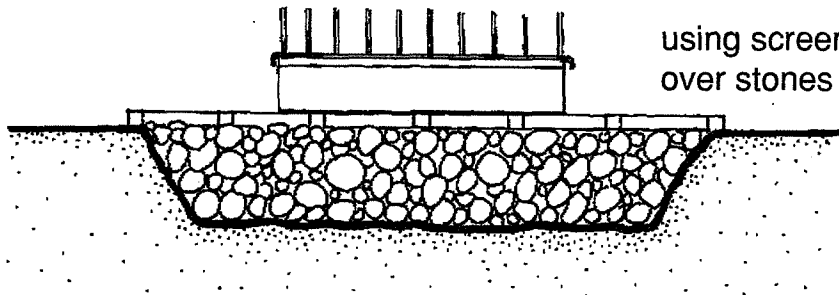
105. Remember, ducks like to splash and play in water and they may do this in their drinkers as well.
106. So, to keep the ground around your drinkers from getting wet and muddy, cover the ground with sand or gravel to help keep it dry.
107. You can also put the drinkers on a plastic or wire mesh screen, placed over a shallow hole filled with medium-sized stones (see page 61 in this booklet). That way, any water spilled will drain away before the ground can get wet.

protecting ground around drinkers

using sand or gravel



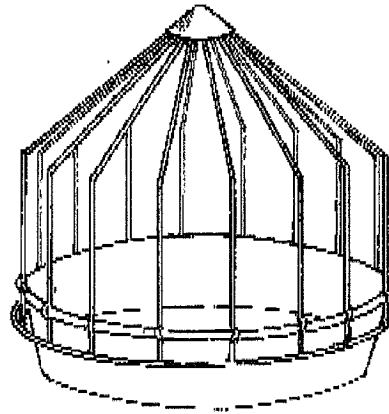
using screen  
over stones



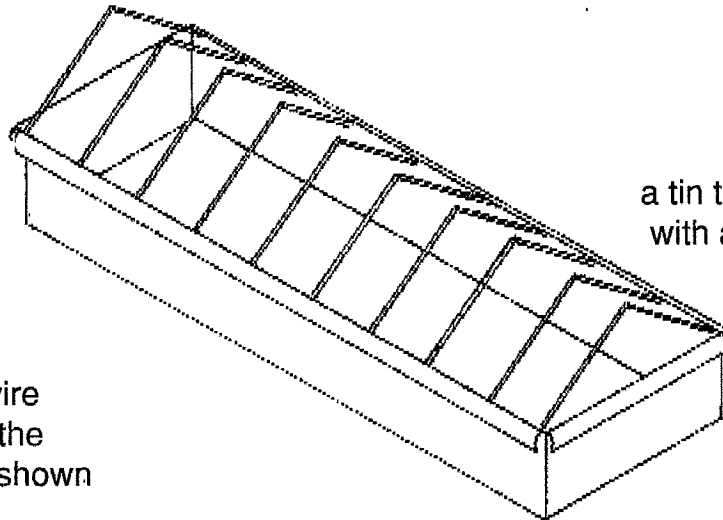
108. On the following pages you will see some examples of home-made drinkers using locally available materials such as plastic or metal pans, with or without soldered wire covers, or made from pieces of galvanized tin soldered in the shapes shown.

## Various kinds of drinkers

a drinker using  
a plastic or  
metal pan  
with a wire  
cover

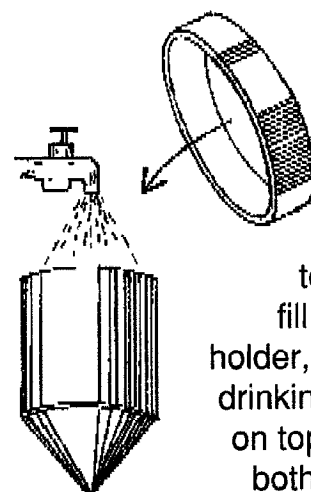
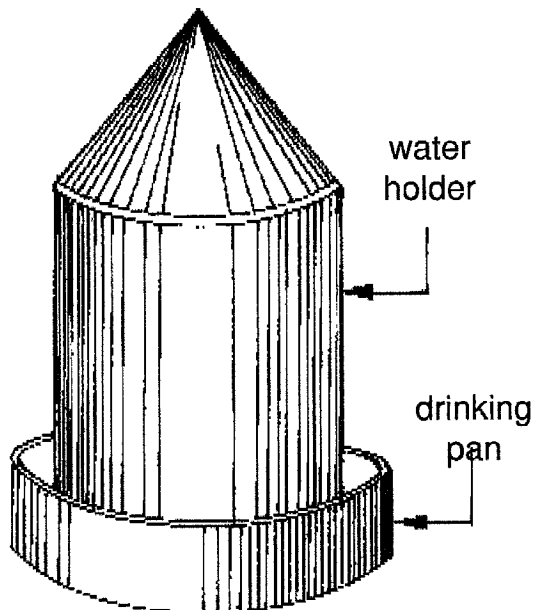


a tin trough  
with a wire  
cover



**note:**  
solder wire  
or tin in the  
shapes shown

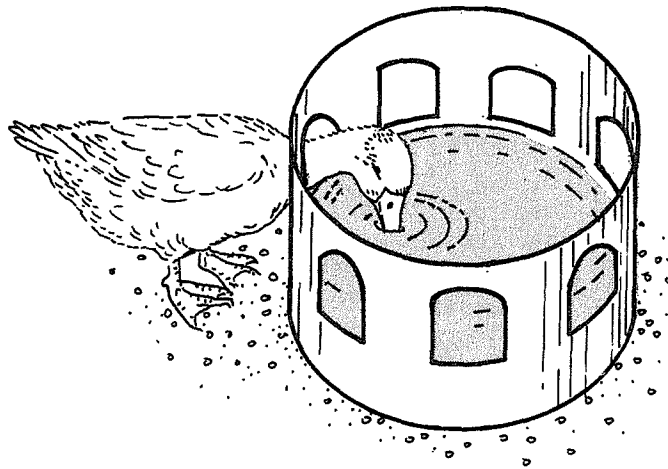
a self-filling tin container  
with an airtight water holder  
and a drinking pan



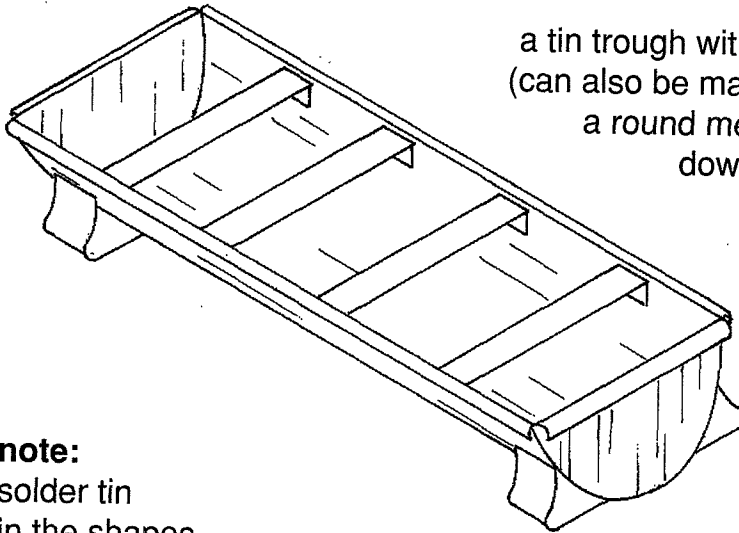
to use,  
fill water  
holder, place  
drinking pan  
on top, turn  
both parts  
over

## *Drinkers, continued*

a tin container  
with drinking  
holes for  
the ducks

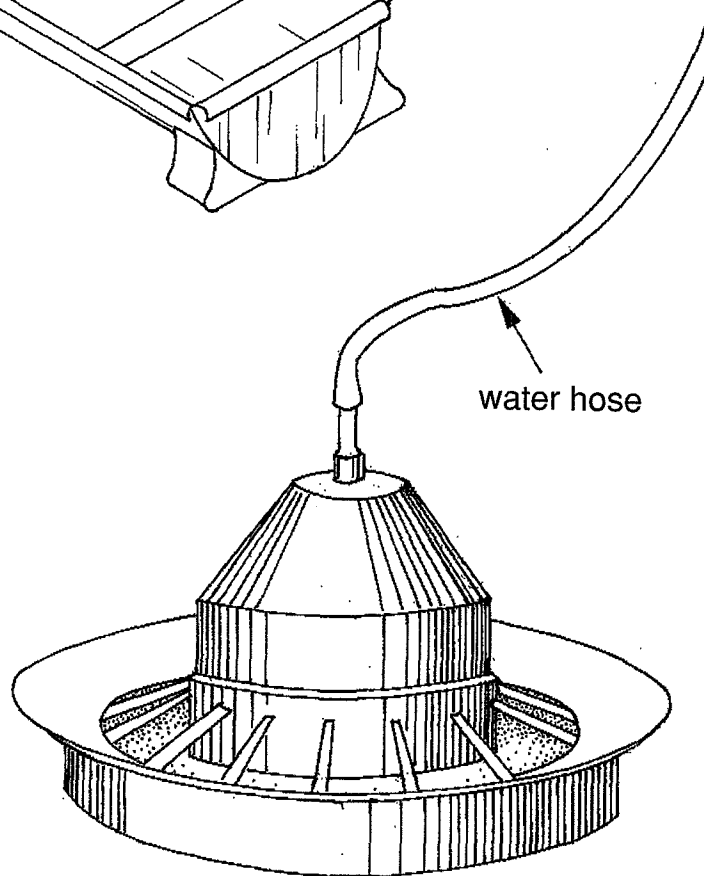


a tin trough with cover strips  
(can also be made by cutting  
a round metal container  
down the middle)



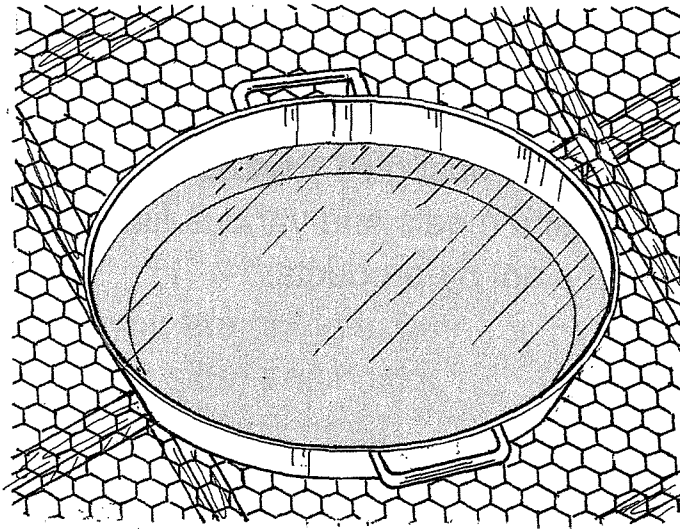
**note:**  
solder tin  
in the shapes  
shown

a hose-fed  
self-filling tin  
container with  
an airtight  
water holder  
and a drinking  
pan

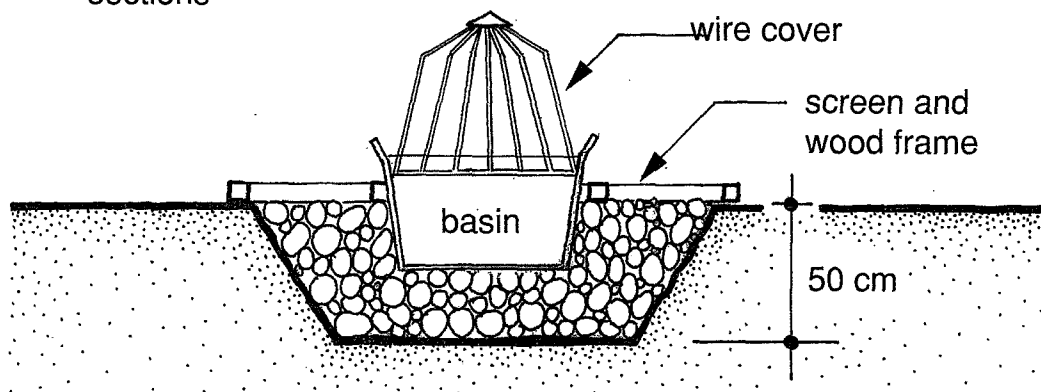


## Drinkers, continued

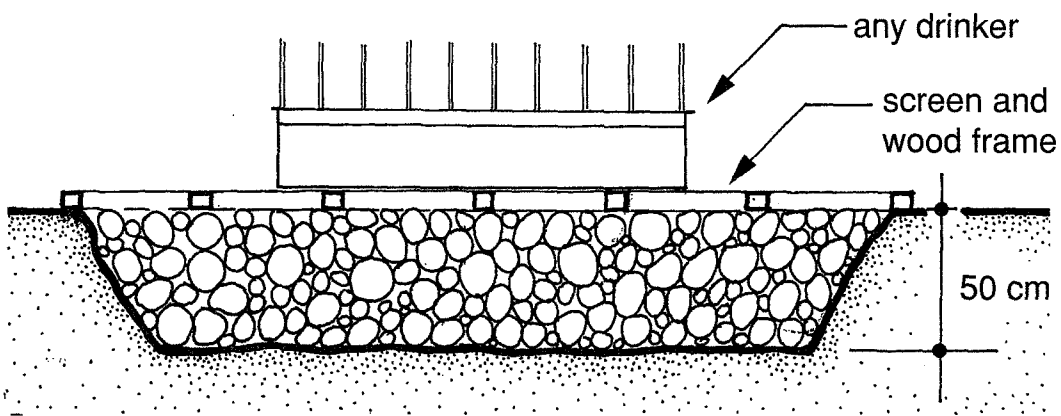
a plastic or metal basin set in a hole filled with stones and covered with a screen and wood frame to protect against water and mud



sections

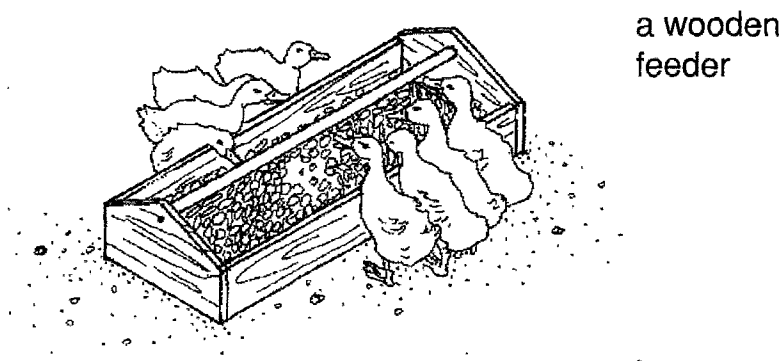


any of the drinkers you have been shown can be placed over a stone-filled hole covered with a screen and wood frame



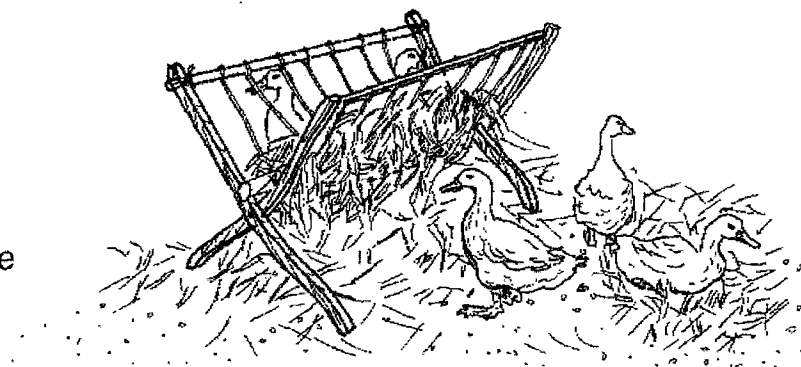
## Feeders for a larger flock

109. Feeders are needed for the feedstuffs you must give your ducks, such as grains and meals and various fish, animal and plant by-products.



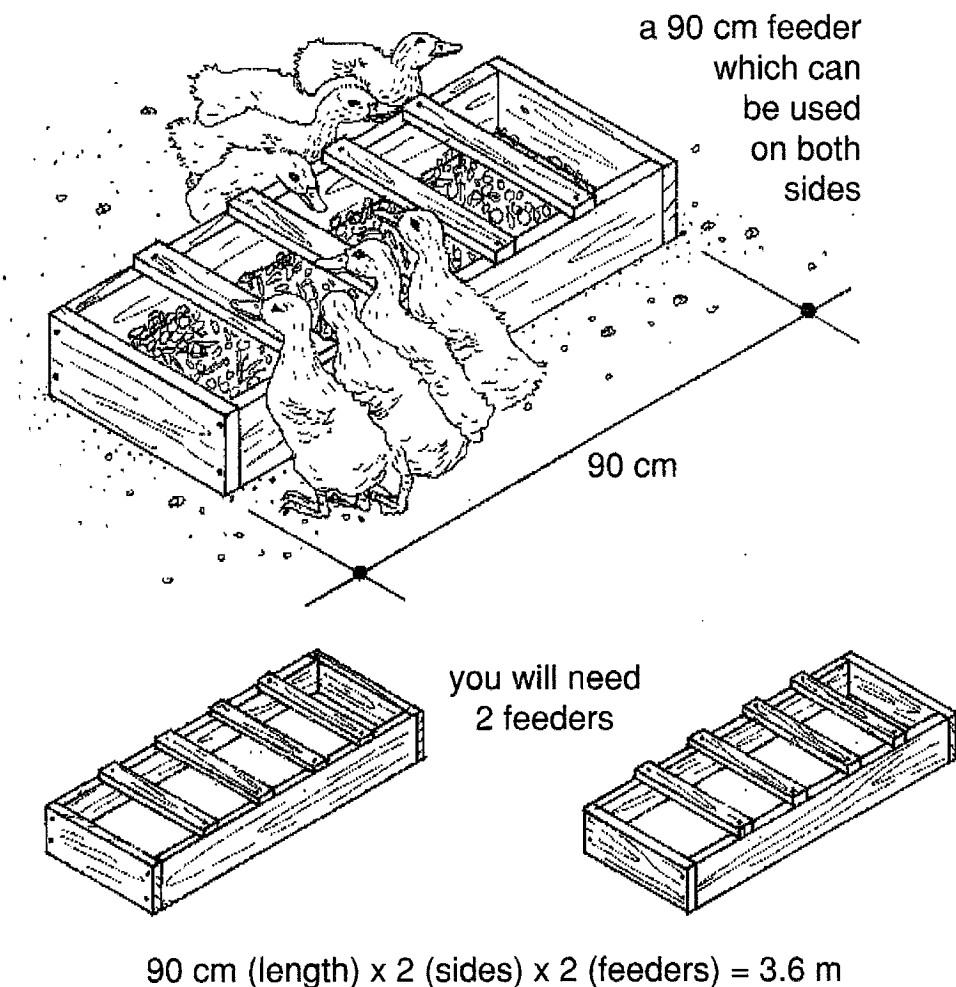
a wooden feeder

a rack for fresh or dry forage



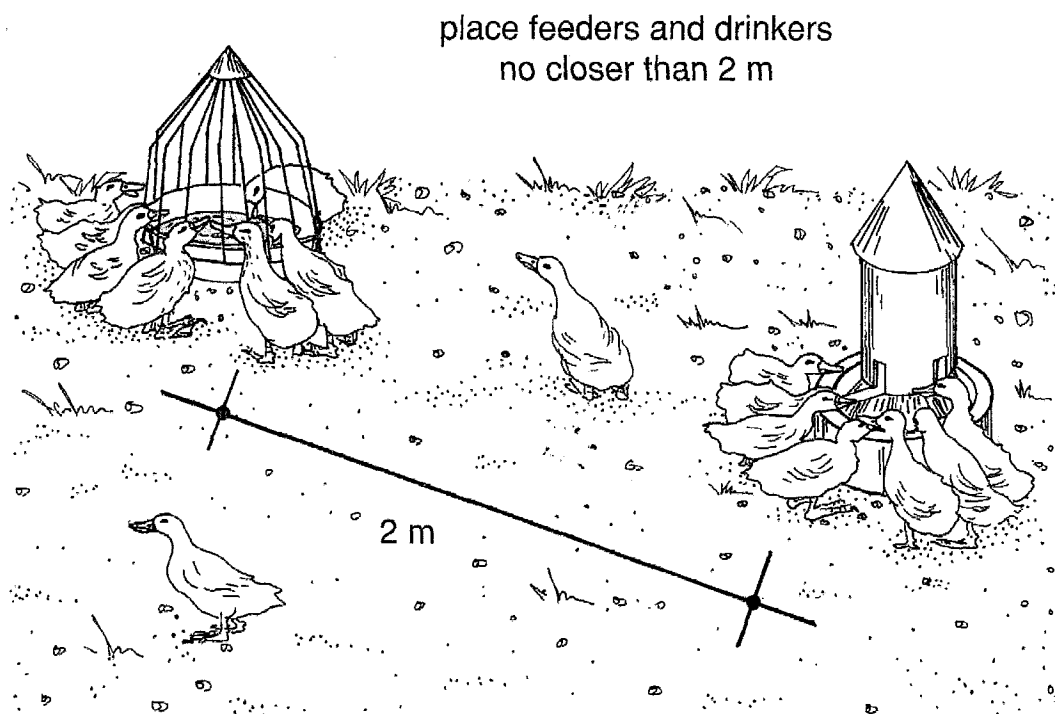
110. You may also want to provide racks suitable for fresh forage. You will learn what you need to know about these various feedstuffs in *Raising ducks 3*.
111. To give you an idea of the amount of feedstuffs needed, a 7-week-old duck eats about 0.25 kg of food daily. So, with 60 ducks you will need about 15 kg each day.

112. In addition, to give you an idea how many feeders you will need, plan for about 6 cm of space for each fully grown duck. So, with 60 ducks you will need about 3.6 metres of eating space.
113. So if the feeders that you are going to use measure 90 cm on each side, and ducks can eat from both sides, you will need 2 feeders.



**Note:** You can feed your ducks better if you have a number of small feeders rather than using fewer large ones. That way you can give your ducks different feeds in different feeders.

114. As with drinkers, feeders should be protected so that ducks cannot get into them and dirty their food.
115. Ducks usually take a bite of food and then go to have a sip of water. If the feeders and drinkers are placed too close together, your ducks will leave pieces of food in their water and will get water in their food.



116. So place feeders and drinkers no closer than 2 metres. That way the food will stay dry and the water will stay clean.

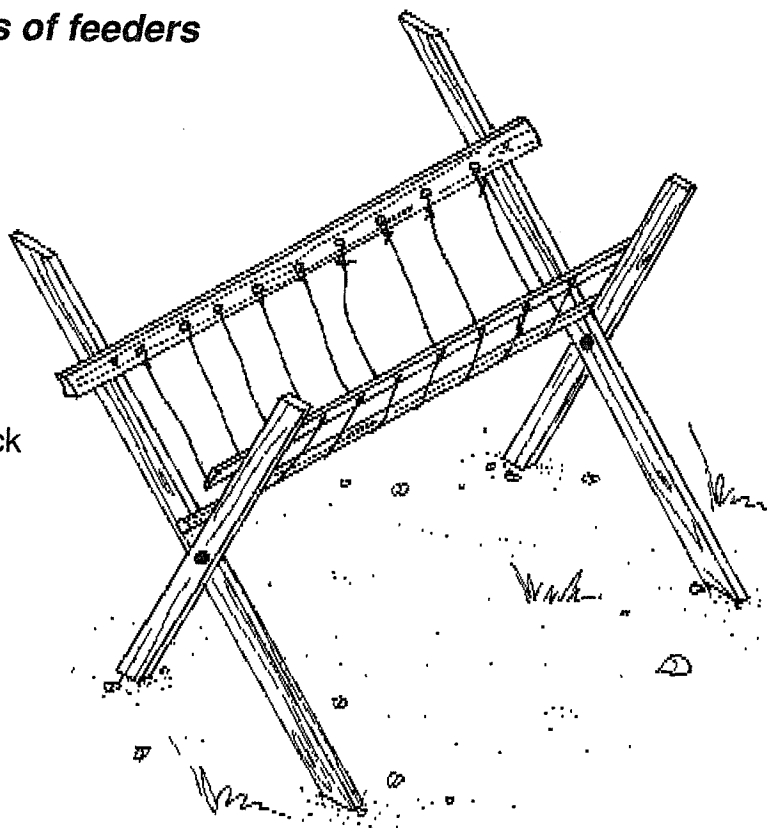
**Note:** Wet food may get mouldy and this could make your ducks sick or could even kill them.

117. On the following pages you will see some examples of home-made feeders using locally available materials such as wood, bamboo or used tyres, with or without soldered wire covers, or made from pieces of galvanized tin soldered in the shapes shown.



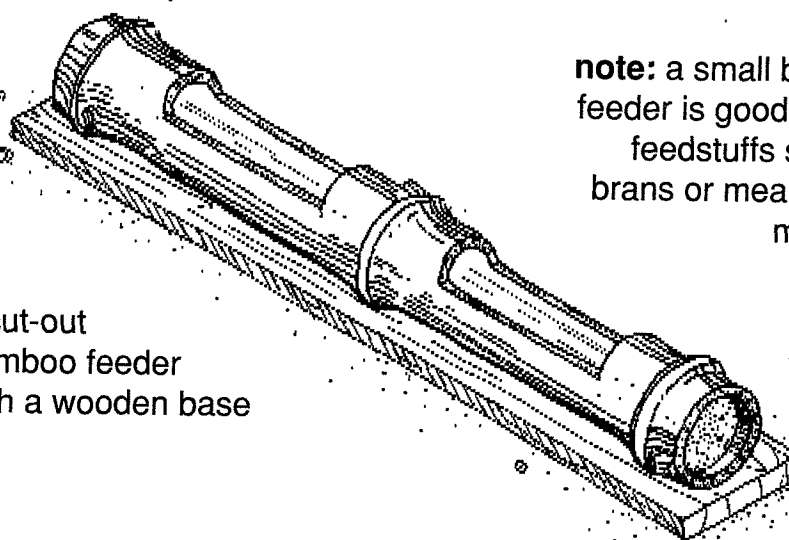
## Various kinds of feeders

a wooden rack  
with rope  
lashings  
for fresh  
or dry forage

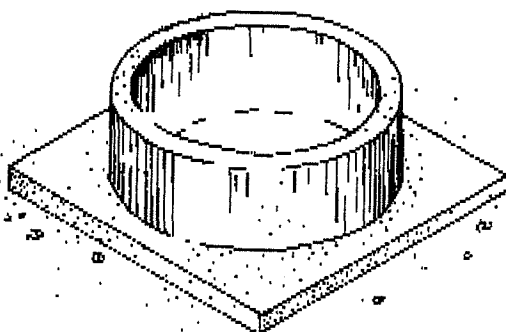


**note:** a small bamboo  
feeder is good for fine  
feedstuffs such as  
brans or meals or for  
minerals

a cut-out  
bamboo feeder  
with a wooden base

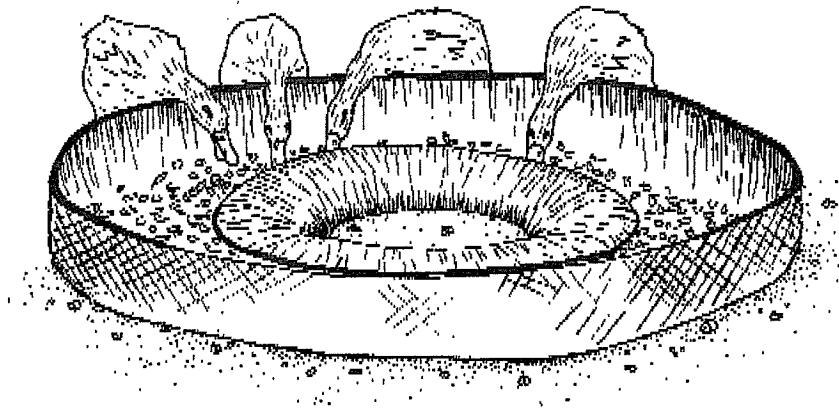


a metal or  
plastic feeder  
with a wooden base

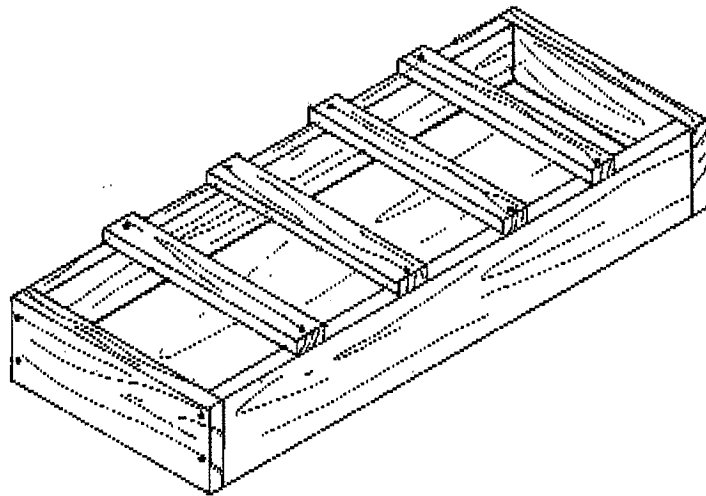


## *Feeders, continued*

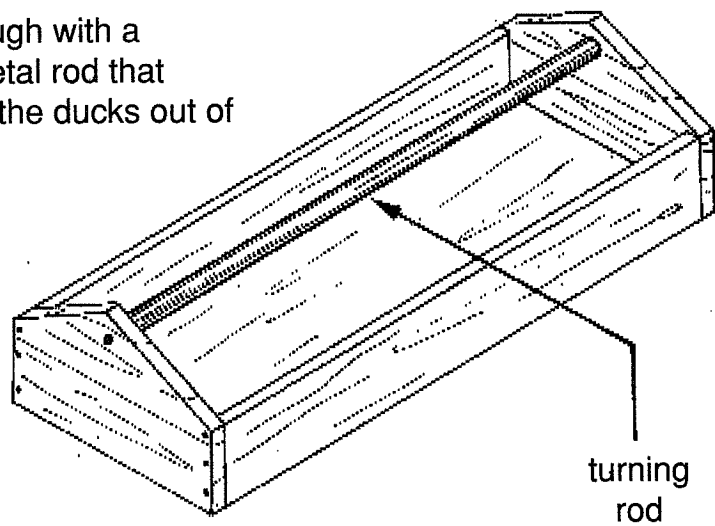
a  
split  
tyre



a wooden  
trough with a  
wooden slat  
cover

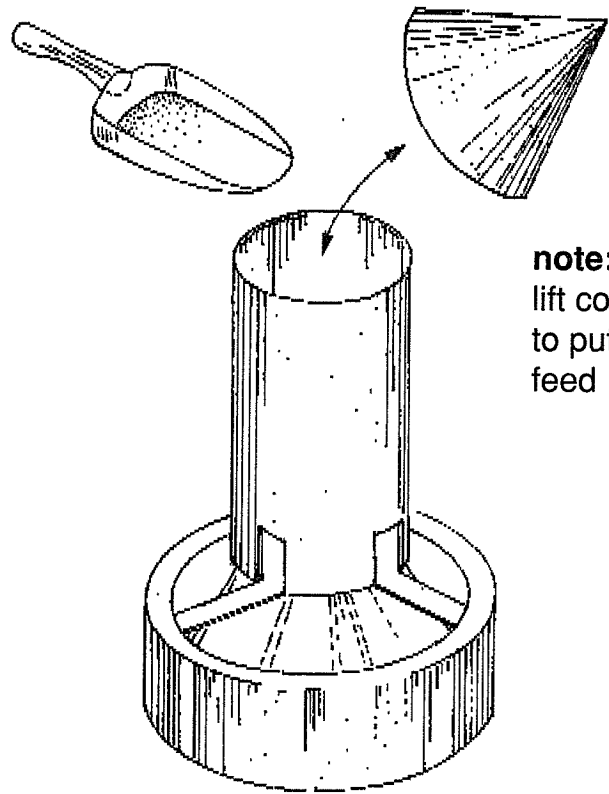
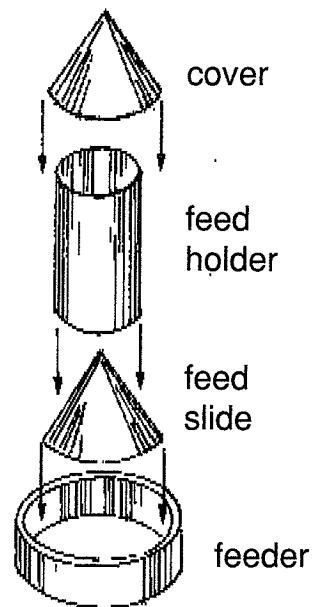


a wooden trough with a  
wooden or metal rod that  
turns to keep the ducks out of  
the feed



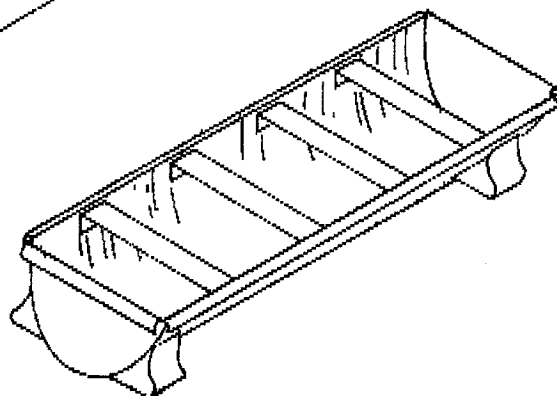
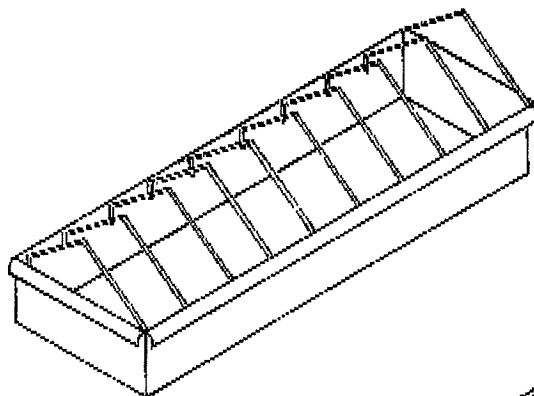
## Feeders, continued

a self-filling  
tin container  
with a cover



**note:**  
lift cover  
to put in  
feed

tin troughs similar  
to those shown on  
pages 59 and 60  
can also be  
used for  
feeds

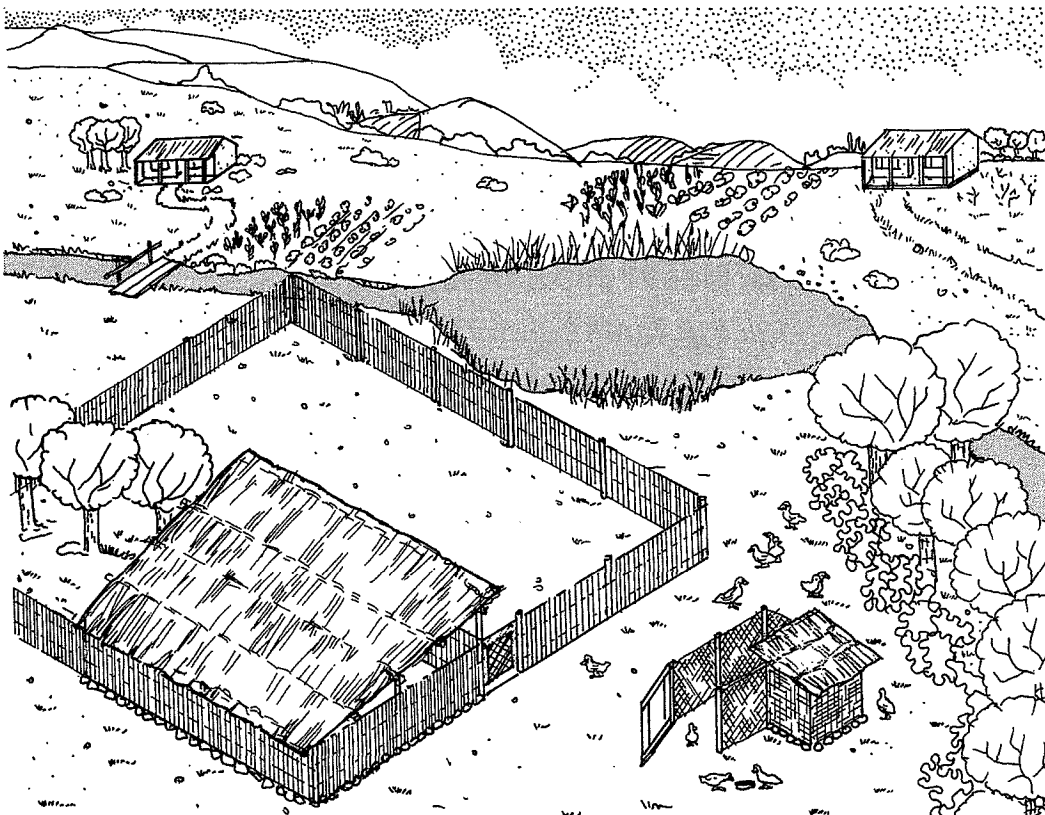


**note:** solder  
tin in the  
shapes shown

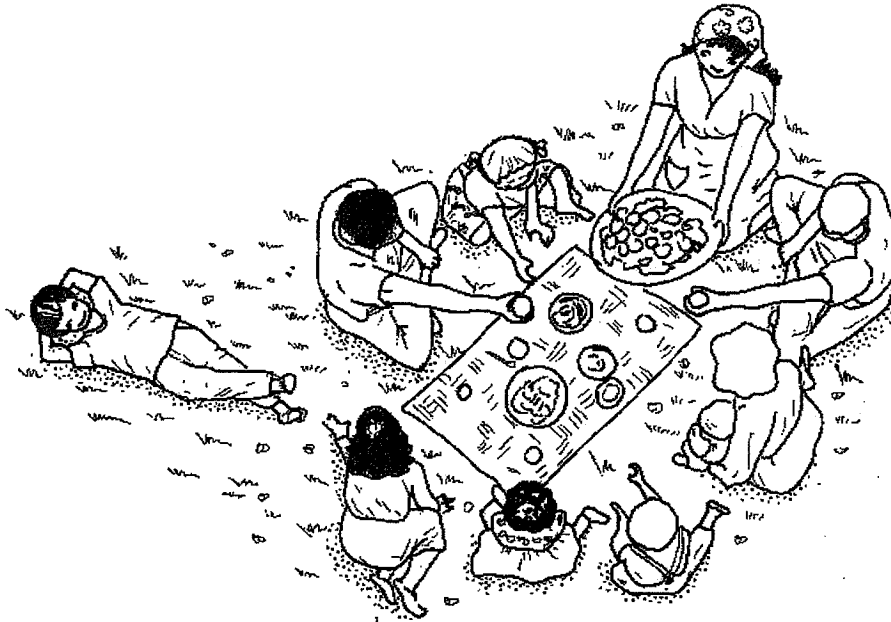
## WHERE ARE WE NOW?

---

118. In this booklet you have learned about raising a larger duck flock. You have learned more about ducks and about all the extra work that must be done if you decide to raise up to 60 ducks.
119. You have also learned how to build a larger and better duck house, fence in a large yard and build a swimming pool suitable for up to 60 ducks.
120. Perhaps you and your family, with the help of another farm family living near you, have already built a new duck house with a yard like the one below.



121. If you have, why don't you all have a picnic to celebrate the work you have done together? You can talk about what you will do with the money you will make at the market! You can also talk about what you will have to do next!



122. There are still some things that you need to know about raising a larger flock. In the next booklet in this series, booklet No. 41, *Raising ducks 3: further improvement, taking care of a larger flock*, you will learn more about ducks and how to:

- feed a larger flock;
- grow your own baby ducks ;
- hatch eggs using heat;
- take better care of your ducks;
- raise ducks with fish;



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**This is the first of two manuals prepared as a follow-up to the introduction to raising ducks (*How to begin*) in FAO's "Better Farming Series". This booklet deals with raising a larger flock of ducks for family use and for sale. The approach taken requires little help outside the family or families participating. It stresses a balanced diet, clean drinking-water and clean and dry living conditions as essential factors in controlling diseases and for simple and successful duck production. Sequential illustrations are included showing how to lay out and build a duck house, with a yard or run and a pool, in sufficient detail to ensure ease of construction. Various essential types of equipment such as nests, drinkers and feeders are also covered.**

