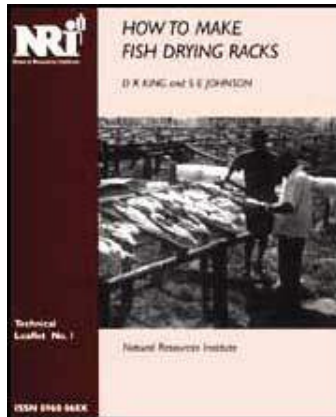


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➔  **How to Make Fish Drying Racks (NRI, 1991, 8 p.)**

 **(introduction...)**

 **Fish Drying**

 **(introduction...)**

 **Traditional drying techniques**

 **Traditional drying**

 **Drying racks**

 **Construction of drying racks**

 **Other methods**

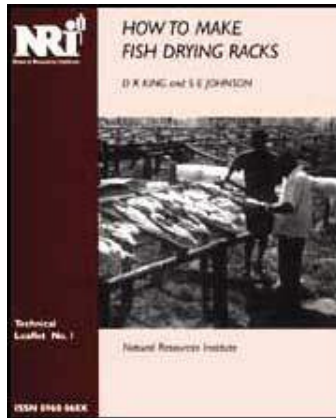
 **Conclusions**

 **Further reading**



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 **How to Make Fish Drying Racks (NRI,**



How to Make Fish Drying Racks (NRI, 1...

1991, 8 p.)



(introduction...)



Fish Drying



Further reading

Technical Leaflet No. 1
D. R. King and S. E. Johnson

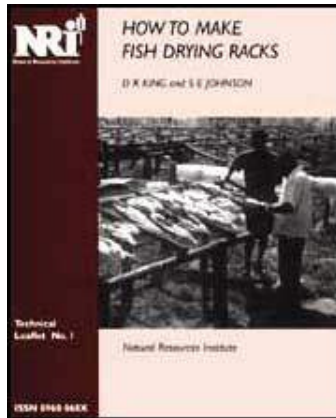
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How to Make Fish Drying Racks (NRI,



1991, 8 p.)

➔ **Fish Drying**

📄 **(introduction...)**

📄 **Traditional drying techniques**

📄 **Traditional drying**

📄 **Drying racks**

📄 **Construction of drying racks**

📄 **Other methods**

📄 **Conclusions**

How to Make Fish Drying Racks (NRI, 1991, 8 p.)

Fish Drying

Drying is one of the simplest ways to preserve fish. To get the best results it must be done quickly and cleanly.

Water occurs naturally in the fish's body. When a fish is dried, water that is close to the skin or cut surface is lost first. Water that is deep in the flesh takes longer to leave. Thick fish must be

split in half so that they dry quickly. Fatty, salty or partly dried fish also take longer to dry.

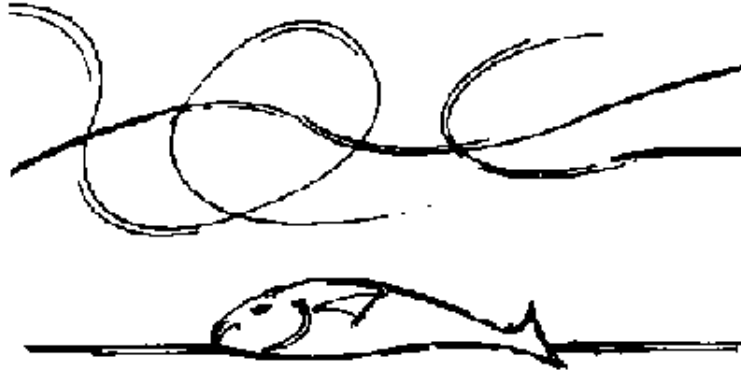
When fish is drying, air takes up the water. If the air is damp and moving weakly it cannot carry much water, so drying is slow. Fish dry more quickly in stronger currents of air. Good quality products can be produced when there is plenty of sunlight and dry, moving air.

If the drying is slow, fish can be spoilt by insects, moulds and dirt. To get the best results fish must be dried quickly in currents of air and protected from insects and dirt.

Traditional drying techniques

The basic method of sun-drying fish is to spread them on the ground, rocks or a sandy beach. Using this technique, drying can be slow and the fish is easily spoilt. The use of drying racks has many advantages over traditional methods.

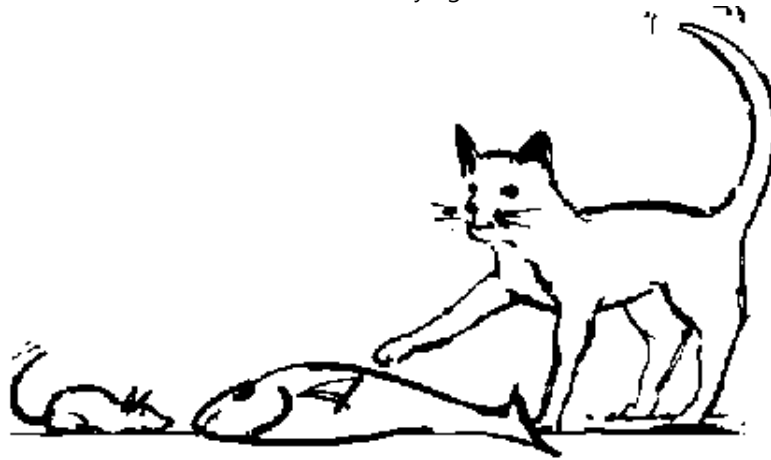
Traditional drying



1. Air currents at ground level are weak.



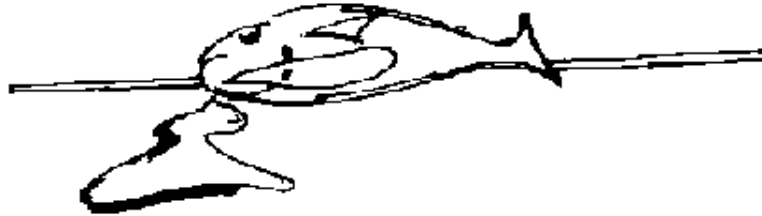
2. Air can only pass on one side of the fish.



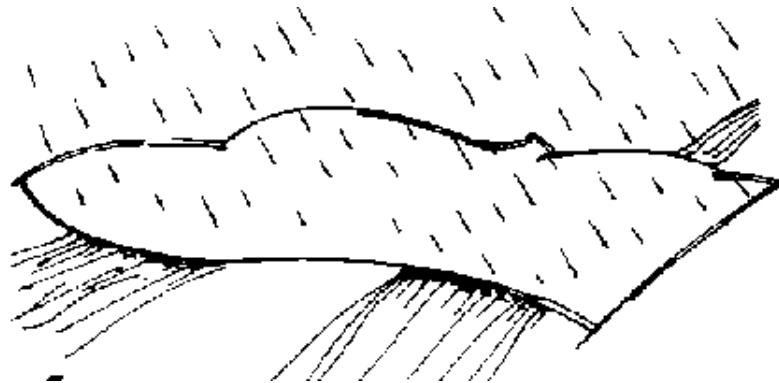
3. Pests and domestic animals can easily steal or dirty the fish.



4. Drying conditions lead to spoiling with dirt, sand etc.



5. Water can collect in the gill and gut cavities when the fish is lying flat and this slows drying.



6. Fish can be protected from rain by covering them with a sheet of plastic or other waterproof material, but not from ground water.

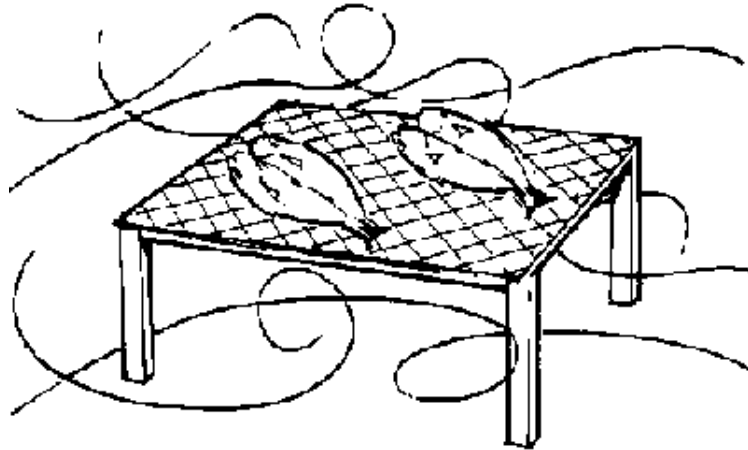


7. The use of mats, while reducing dust and dirt, provides shelter for insects.

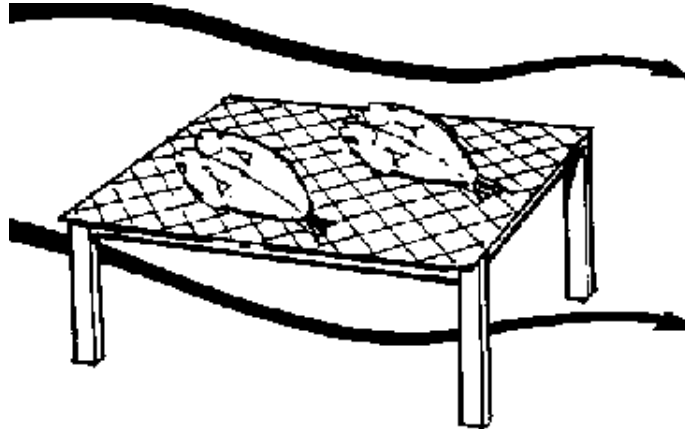


8. The area used for drying is difficult to keep clean. If rubbish is allowed to build up, insects and pests can spoil the fish.

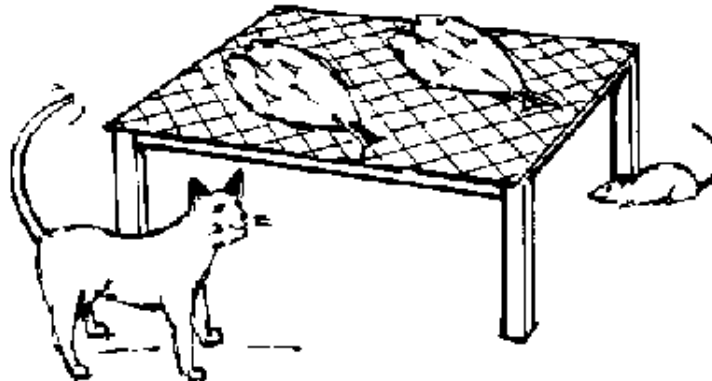
Drying racks



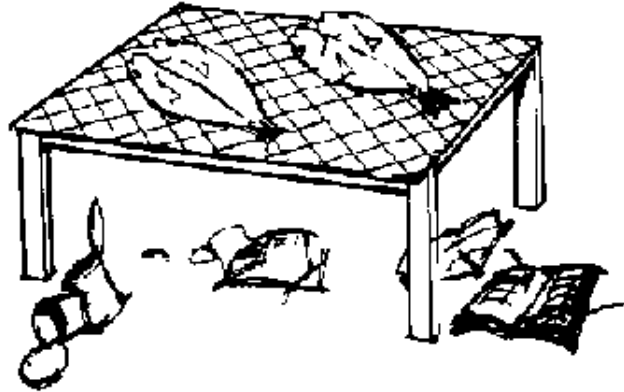
1. Air currents are stronger above the ground.



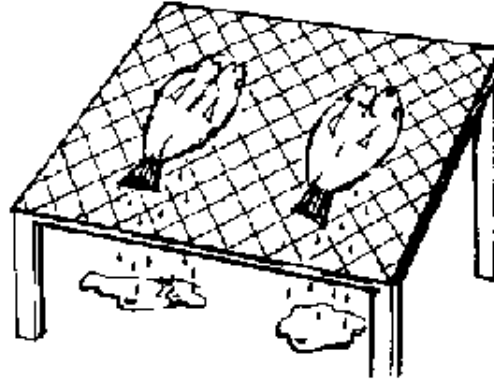
2. Air can pass over both sides of the fish reducing the drying time.



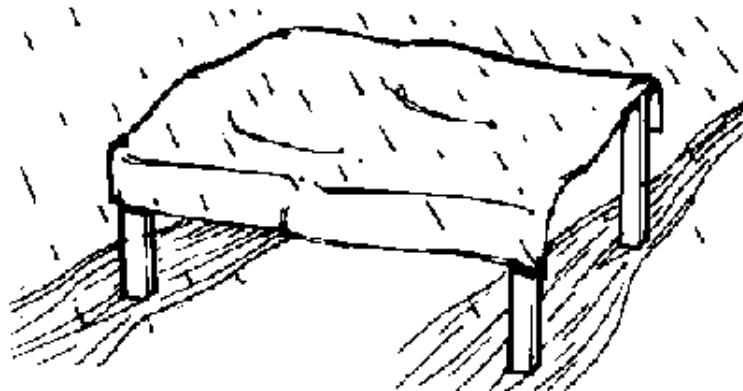
3. Pests and domestic animals cannot easily reach the fish.



4. A cleaner product is obtained as there is no contact with dust and dirt.

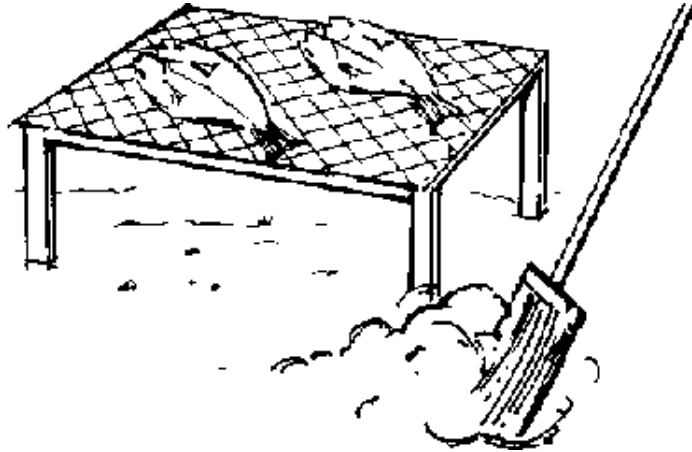


5. Sloping racks allow the drainage of water which collects in the gut and gill cavities.

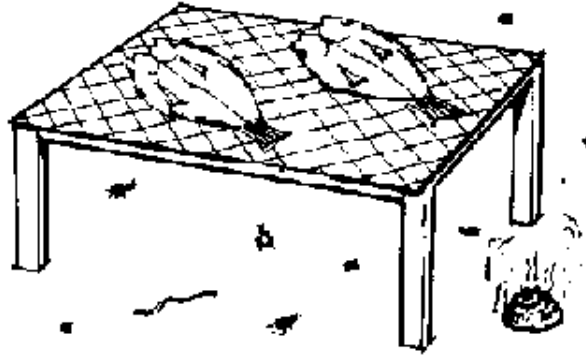


6. The fish can easily be protected from rain and groundwater by

covering with a sheet of plastic or other waterproof material.



7. Crawling insects find it more difficult to reach the fish and there are fewer hiding places.

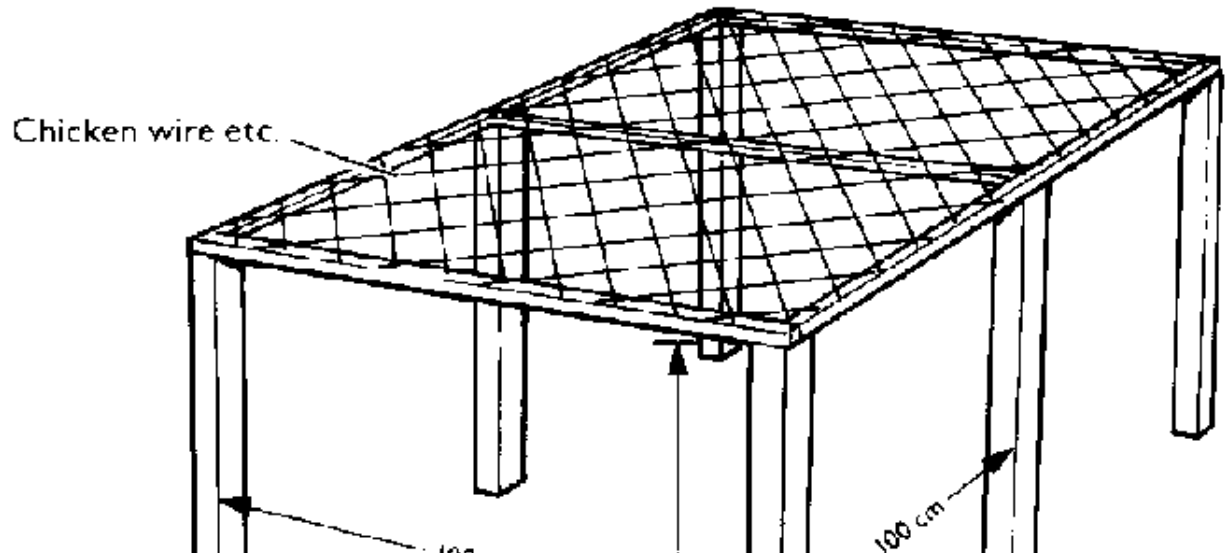


8. It is easy to remove any rubbish, e.g. broken fish, leaves etc., from under the racks, so there is no food or hiding places for insects and pests.

Construction of drying racks

Drying racks can usually be made, at very little cost, from locally available materials such as bamboo, tree branches etc. The racks should be positioned in an exposed place with good winds and low humidity. They must be kept away from trees and areas such as rubbish dumps and processing yards which attract large numbers of insects and animals.

Figure I shows a rack with a flat top. To make the rack, 160 cm lengths of timber should be cut. These are then buried in the ground to a depth of about 60 cm. They are arranged about 100 cm apart in two lines, the distance between the posts being the width of the drying rack. Lighter pieces of wood or bamboo are fixed between the top of the posts. Material, such as chicken wire, mosquito netting, old fishing nets, reeds or coconut matting, is then fixed to these canes to support the fish.



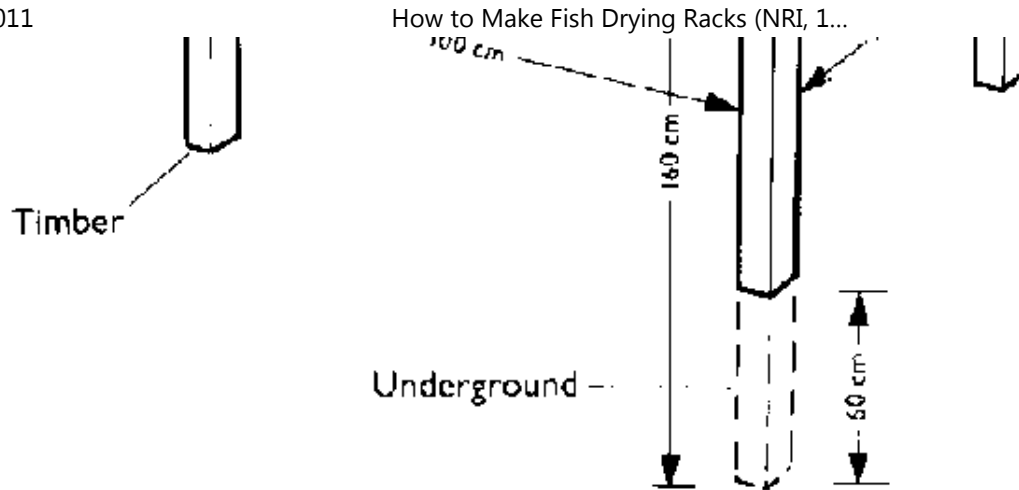


Figure 1

A flat-topped drying rack is used for small fish and for fillets and steaks.

Figure 2 shows a rack with a sloping top. Its construction is similar to the flat-top rack. However a taller pole is used in the centre or on one side of the rack to form a rack with a double or single slope. By altering the height of the taller pole, the angle of the rack can be changed.

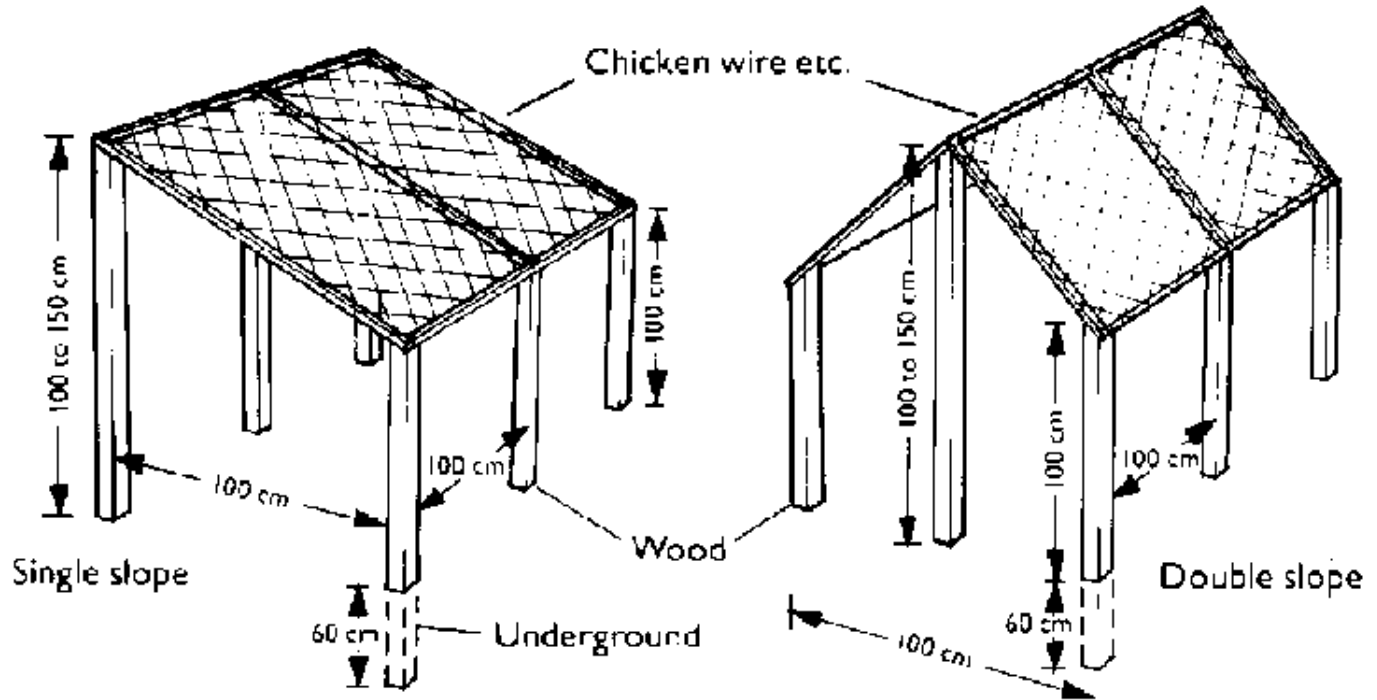


Figure 2

A drying rack with a sloping top is suitable for split fish. This allows any water which collects in the gut or gill cavities to drain away. To prevent the fish sliding down the slope they are

hooked on to the supporting material by their gill covers.

The two racks shown in Figures 1 and 2 are permanent structures. However, many fishing villages have to be constantly moving in search of fish.

Figure 3 shows a drying rack that can be quickly built and taken apart. It is made of bamboo or branches.

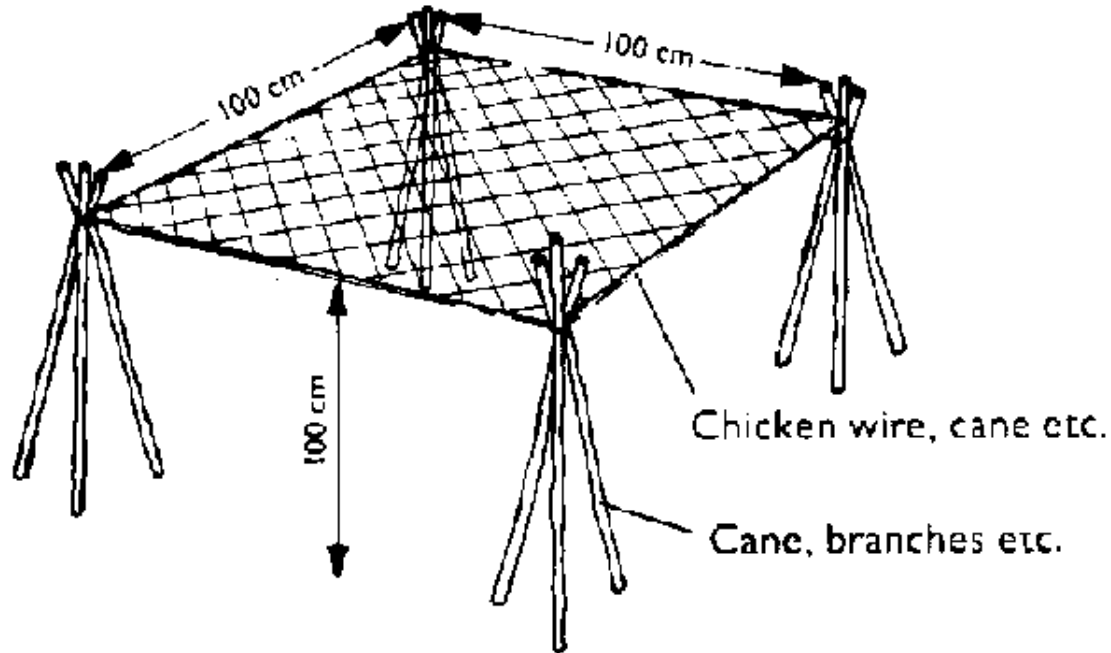


Figure 3

Figure 4 shows another portable drying rack. This rack would also be suitable for demonstration by extension workers.

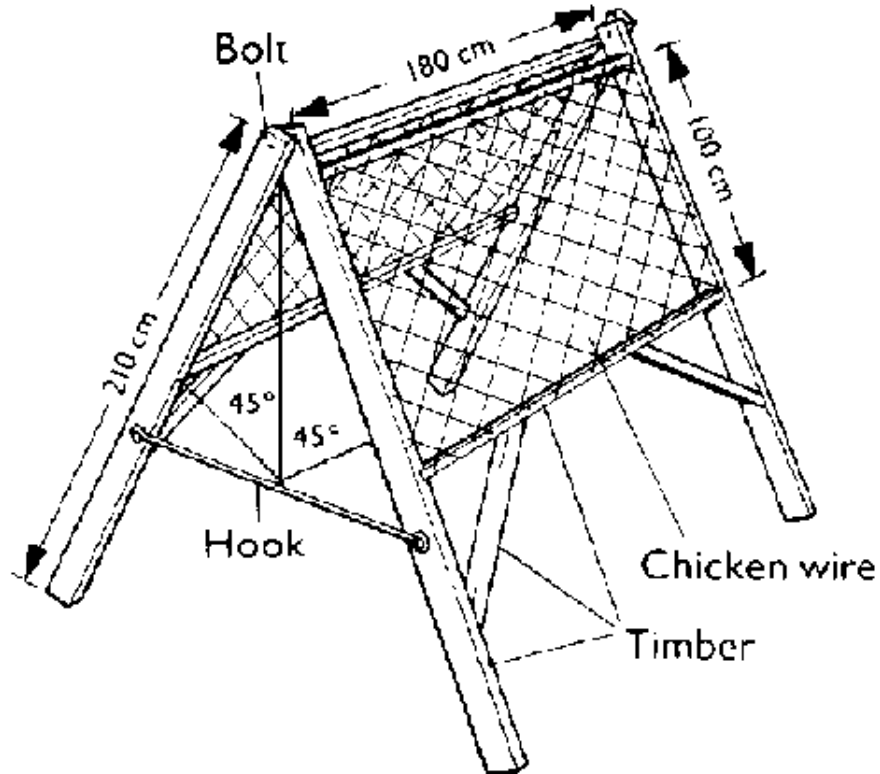


Figure 4

Other methods

Fish can also be dried by hanging them from ropes or canes stretched between posts, Figure 5, these being about 1-2 metres in height.

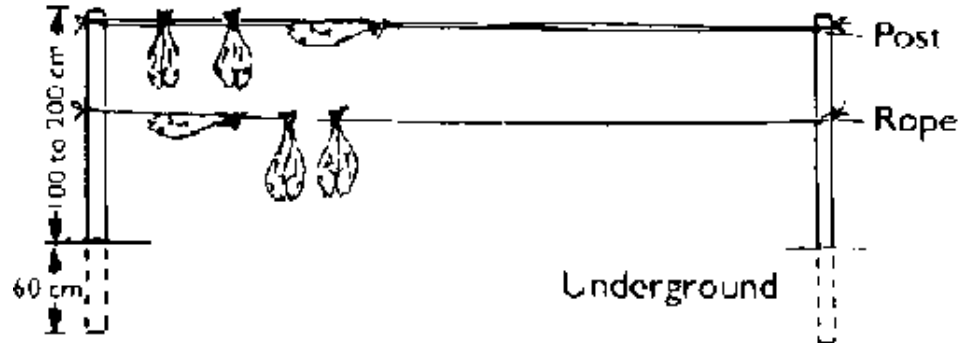


Figure 5

Conclusions

The methods for drying fish given in this advisory leaflet have the following advantages when compared to fish dried in the traditional way:

- **a reduction in losses**
- **a higher quality product**

- a shorter drying time
- a cleaner product

The use, in the making of the racks, of low-cost locally available materials should not greatly increase the price of the product. The cost of the drying racks will be quickly recovered as losses will be lower and prices will be higher for the better quality products that are produced. If improvements are demonstrated by producing a better product, with reduced losses in a shorter time, then fisher folk will use drying racks.



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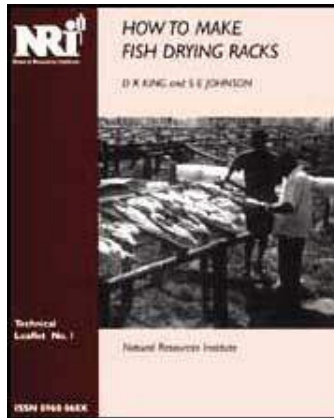
(introduction...)



Fish Drying



Further reading



Further reading

Bostock, T.W., Walker, D.J. and Wood C.D. (1987) Reduction of losses in cured fish in the tropics guide to extension workers. TDR Report No. G204.

FAO (1975) Production of dried fish. FAO Fisheries Technical Paper No. 160.

FAO (1981) The prevention of losses in cured fish. FAO Fisheries Technical Paper No. 219.

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