

# A WOODEN HAND-HELD CORN SHELLER

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## INTRODUCTION

This article describes how you can make and use a wooden hand-held tool for taking off the grains from corn cobs when they are hard and dry.

The sheller is easy, quick and cheap to make, using very simple tools.

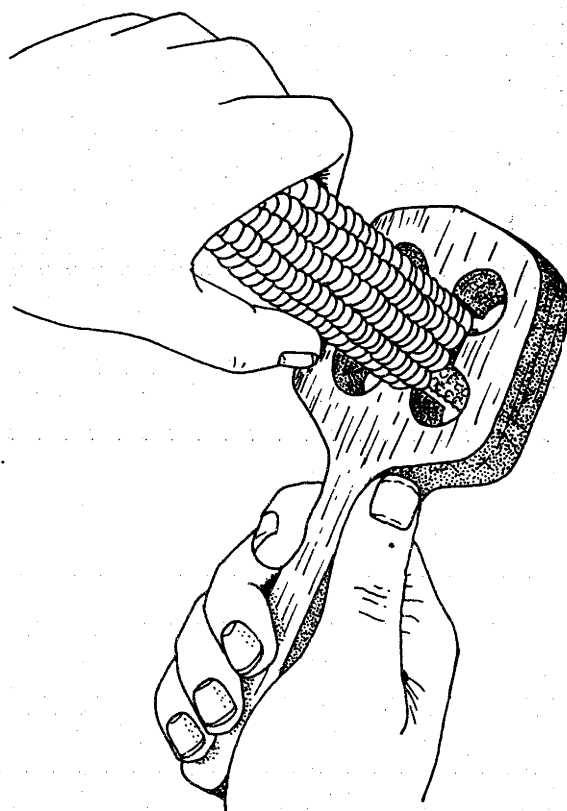
You will know that not all corn cobs are the same size. The plans explain how you can change the design to make the best size sheller for your crop.

## HOW TO USE THE SHELLER

The sheller is shown in use in the diagram. You hold the dry corn cob in one hand and the sheller in the other. You push the end of the cob into the large hole in the sheller. By working the sheller around the cob, the ridges will pull out the grain. When half the grain has been removed, turn the sheller over, and remove the rest of the grain holding the other end of the cob.

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*This article is adapted from: A wooden hand-held maize sheller. By G.S. Pinson. Rural Technology Guide Guide, No. 1. (1977). Tropical Products Institute, London. 12 pp.*

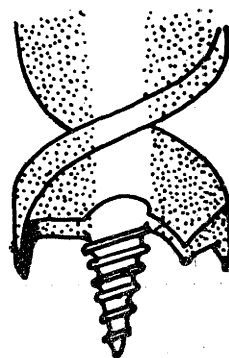
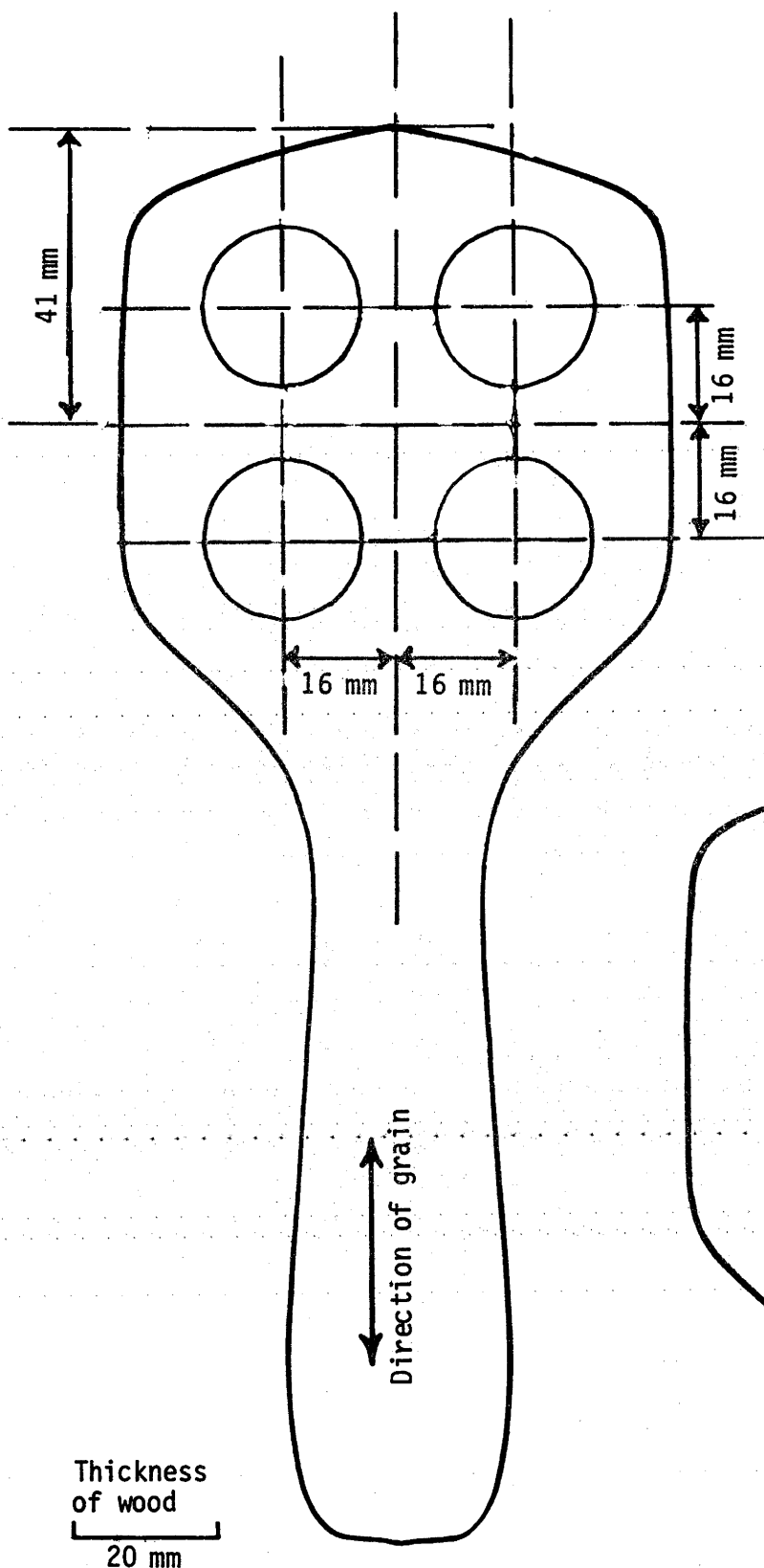


*The corn sheller in use*

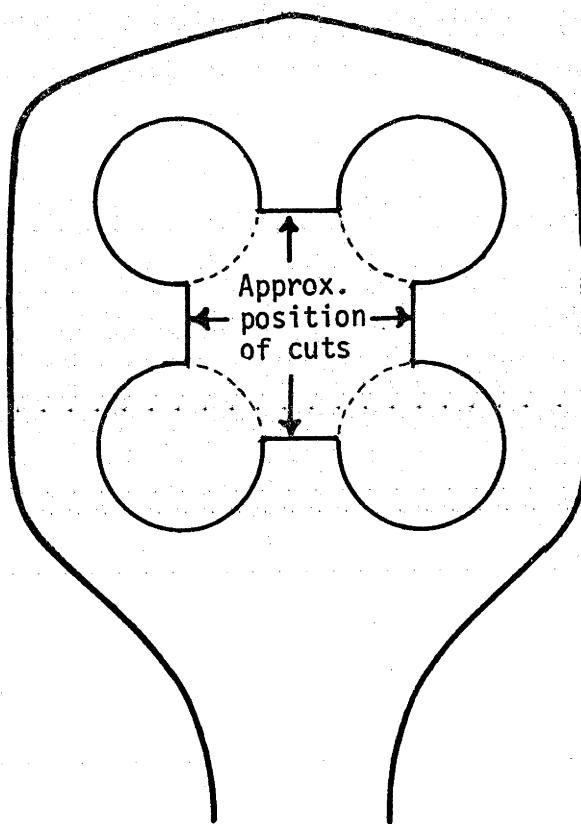
## HOW TO MAKE THE SHELLER

You will need the following:

1. A hand saw, sandpaper
2. A chisel or knife
3. A hand brace and helical bit 22mm ( $\frac{7}{8}$  inches) in diameter.
4. Hacksaw blade
5. A piece of strong hard wood.



Use this type of bit in a hand-brace to drill the 4 holes. The bit should be 22 mm in diameter.



Outline of the shape of the sheller showing the position of the 4 holes. Use this shape to make your pattern for cutting the wood.

Make the 4 cuts to remove the wood between the holes as shown here. Before cutting, test that the space left will be the right size for shelling your corn cobs (see text).

Check the kinds of wood available and find a type which drills well, produces good, strong, clean edges and does not split easily. The wood should be cut so that the grain runs in the same direction as shown in the plan opposite.

#### MAKE THE SHELTER IN THE FOLLOWING STAGES

##### Make the basic wooden blank

1. Cut the block of wood to 190 x 80 x 20 mm.
2. Using the plan on the opposite page, make a pattern out of stiff cardboard. Mark out the shape of the tool on the wood using your pattern as a guide. Now carve the handle with a knife to produce a smooth round end with no sharp splinters.
3. Using chisels and sandpaper, give the handle a smooth finish.

##### Mark out the four holes

4. Find the position of the centre of the flat end (about 41 mm from the top edge away from the handle). Mark out from the centre, the centres of the four holes.

##### Drill the four holes, square to the surface

5. With closely spaced holes in hard wood, it is easy to split the wood as the screwed tip of the helical bit goes deeper into the

wood. Drill the hole slowly without pushing down on the brace. Stop when the centre screw just comes through to the other side. Turn the wood over and cut out the remaining wood.

REMEMBER: Always keep your cutting tools sharp

##### Remove the wood between the holes

6. Mark the position of the four cuts needed to remove the central portion of wood - as shown in the diagram. Before cutting out the centre remove the grain by hand from an average sized corn cob. Break the cob in the middle. Check the size of the central stalk of the cob against the cutting marks you have made. The stalk should just fit between the lines. Use a hacksaw carefully to make the cuts sharp and square.

##### Test the shelter

7. Test the shelter on a number of cobs of average size. If it is difficult to pass the cobs through, you can remove a little wood from the top of the ridges using a chisel. you may find that you need to make and use two or three shelters with different amounts of wood removed, to process all your cobs.
8. Remove all splinters and surface roughness. If you wish you can oil the surface to make the tool look attractive.