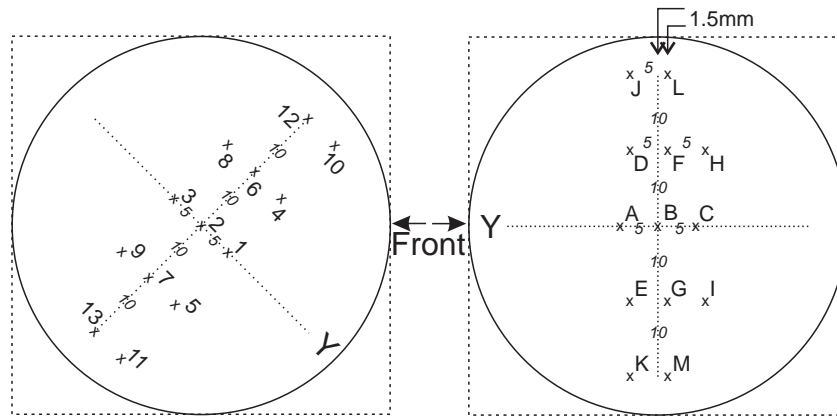


## A BEAN

The plan shown here starts with wood 50mm square and 200mm long. The finished bean is 200 long and 30mm wide. If the wood size is significantly different then the offsets will need to be changed. There will be five beans in the pod.

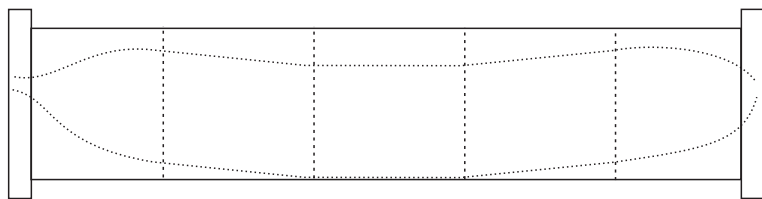
Note the 45° difference between the ends. This gives the bean a twist. Note the offset of most of the centres on the right end. This gives the bean a “split open” end.



If the starting block is less than 50mm thick, keep the ends square to support the major offsets.

↑ Changes away from centre are changes in fatness and curve of each cut.  
↓

← Changes to left and right of centre make the overall curve of the bean.  
→



Using centres 2B make the wood round and 40mm dia. Keep the ends large and 10mm thick as a good grip for the drive and tail spurs. Mark the wood into sections of about one fifth of the total length of the wood (about 40mm).

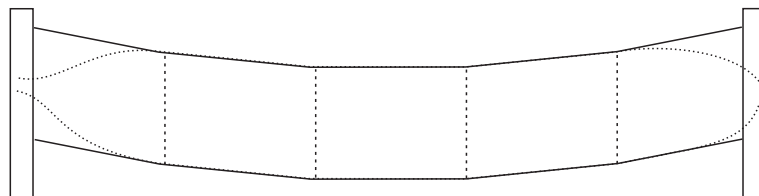
If you want to make the ends thicker, do so, you can return at the end of the project to thin them down.

Now make it the bean size, round, 30mm diameter, and bent.

Use centres 1A and cut the central 1/5

Use centres 2A and cut the fifth to the left of centre. Use centres 3A and cut the left end

Use centres 1B and cut the fifth to the right of centre. Use centres 1C and cut the right end



The joins between the fifths will be irregular. No need to fix that at this stage.

Draw a pencil line along the line between the Y points on the ends. This is where the oval of each side will meet. Accuracy of the line YY is very important. Re-draw the one-fifths marks.

Use centres 4D and cut one side of the central 1/5; centres 5E and cut the other side.

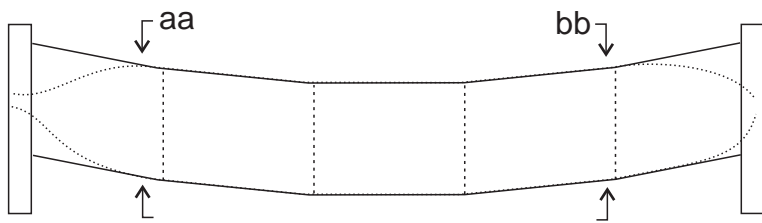
Use centres 6D and cut one side of the fifth to the left of centre; centres 7E other side.

Use centres 8D and cut one side of the left end; centres 9E and cut the other side.

Use centres 4F and cut one side of the fifth to the right of centre; centres 5G other side.

Use centres 4H and cut one side of the right end; centres 5I and cut the other side.

## BEAN Page 2



The plan view will remain the same as after the previous cuts.



Section aa

The cross-sections have changed from round to oval.

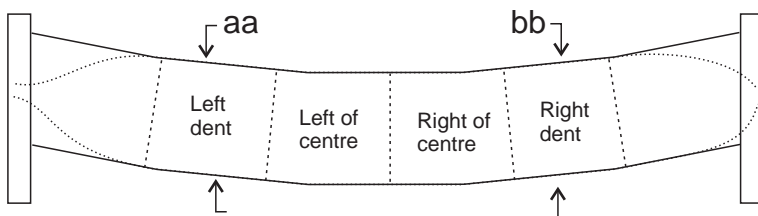


Section bb

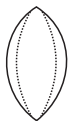
This end has some of the original round surface remaining and this will be carved to make the "open end" of the bean.

Now mark the the wood into six sections (see below). The five marks you make will be the fattest part of each bean in the pod, the ones towards the ends can be drawn in a bit to allow for the top and tail of the bean (try 36, 32, 32, 32, 32, 36). Cut four dents, which extend nearly to the edge of the oval, between each mark on each side.

Use centres 12J and cut the left dent on one side and centres 13K the other side. Use centres 10J and cut the dents to both left and right of centre on one side and centres 11K and cut the dents to both left and right of centre on the other side. Use centres 10L and cut the right dent on one side and centres 11M the other side.



The plan view will remain the same as after the previous cuts.



Section aa

The cross-sections at these points are now narrower.



Section bb

Return to centres 3C and turn the ends down to about 35mm dia. Then re-cut each side at each end using centres 8D, 9E and 4H, 5I.

Now you can return again to centres 3C and round the ends.

If necessary, bandsaw more off the ends to shape.

Sand all surfaces.

Carve into the "split open" end.

