

Peanut/Ground Nut Pod Sizer

Original design by Jack Rejsa, CTI Volunteer

A peanut sheller will usually shell almost any size of pod presented to it. However, shelling is more than separating nut from pod. If whole nuts fetch a premium price in the market, one would want a sheller that produces a large fraction of whole nuts. Most shellers are adjustable for pod size, but they are adjustable for batches, not individual pods. This page shows an easy way to build a peanut pod sizer that permits separating pods into size groupings prior to shelling.



Figure 1

Two diverging sections of 2.5 inch diameter metal conduit pull pods out of a hopper (area at the top) and encourages them to 'float' down the slope in a single line between the rollers.



Figure 2

When the size of the gap between the rollers exceeds the pod width, the pod falls through the gap and is collected in separate containers below.

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Figure 3

Conduit sections are turned by a hand crank.



Figure 4

Three baffles are set to direct pods of three size categories into different containers.



Figure 5

Pods are 'augered' out of the hopper by a helix made from small diameter (1 mm) wire soldered to the conduit.

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Figure 6

The sizer requires that the pods come out of the hopper in one layer so small pods do not ride on adjacent large pods. (Thickness is controlled by the small plastic card on the inside of the hopper, held in place by a bolt with a wing nut). Metal guides also help keep the pods in the gap between rollers.



Fig 7

The conduit rollers must turn away from each other. This is accomplished by running the belt over the left conduit and around the right conduit, and turning the crank in the clockwise direction.



Figure 8

Metal conduit becomes a roller by cutting out and inserting circles of plastic or wood cut to the inside diameter of the conduit. Several small nails through the conduit prevent the circular plug from rotating.

Based on limited tests, production was about 75 – 90 pounds per hour. This rate could be doubled or tripled by constructing a sizer unit with another pair of rollers immediately adjacent to the present set. The rate can also be increased by increasing the size of the wire soldered inside the hopper to give a more positive auger effect. A third option for increasing production is to increase the diameter of the belt pulley so that the conduit rotation rate is increased.