

# PLANTER BOXES

RECOMMENDED FOR

## PLANTING CASTOR BEANS



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OKLAHOMA AGRICULTURAL EXPERIMENT STATION  
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Castor beans require careful handling during planting, otherwise some seeds will be cracked or broken. This reduces germination and results in an uneven stand. When beans are broken, even occasionally, in the planter box, oil and dirt collect on the planting plates and other moving parts, and thereby prevent proper planting.

Mechanical cut-offs and knockers should not be used in castor bean planters because these devices tend to damage the beans.

### Inclined Plate Boxes Give Best Results

All types of planting boxes have been used to plant castor beans, but the inclined plate type seed box (figure 1) has given the best results and should be used wherever possible. It will injure fewer beans and will plant with a minimum of skips or doubles.

The inclined plate type box is also better adapted than other planter boxes, when planting seed that vary in size and that contain some hulls.

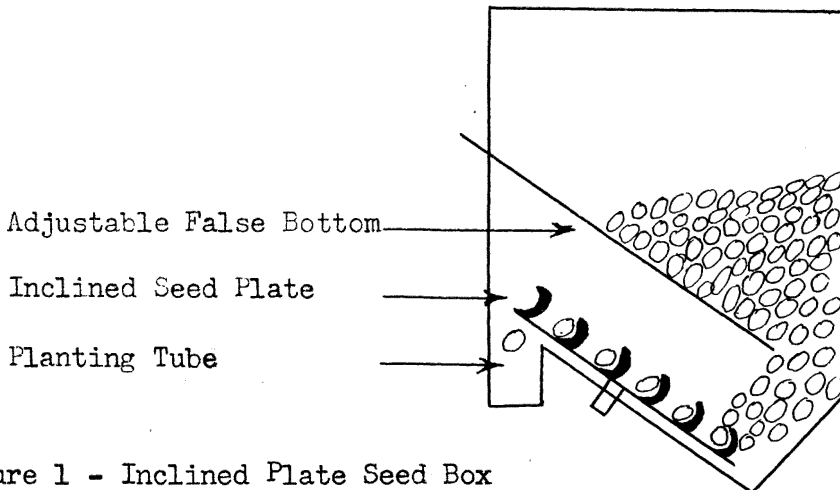


Figure 1 - Inclined Plate Seed Box

The price range of inclined plate boxes varies widely, with the lowest price box retailing for approximately \$20 complete with a set of seed plates. These low price boxes are entirely satisfactory and can be mounted on most any common planter at local machine shops with little expense. Figure 2 shows one make of inclined plate seed hopper that has been mounted to the rear of the base of the original seed hopper.

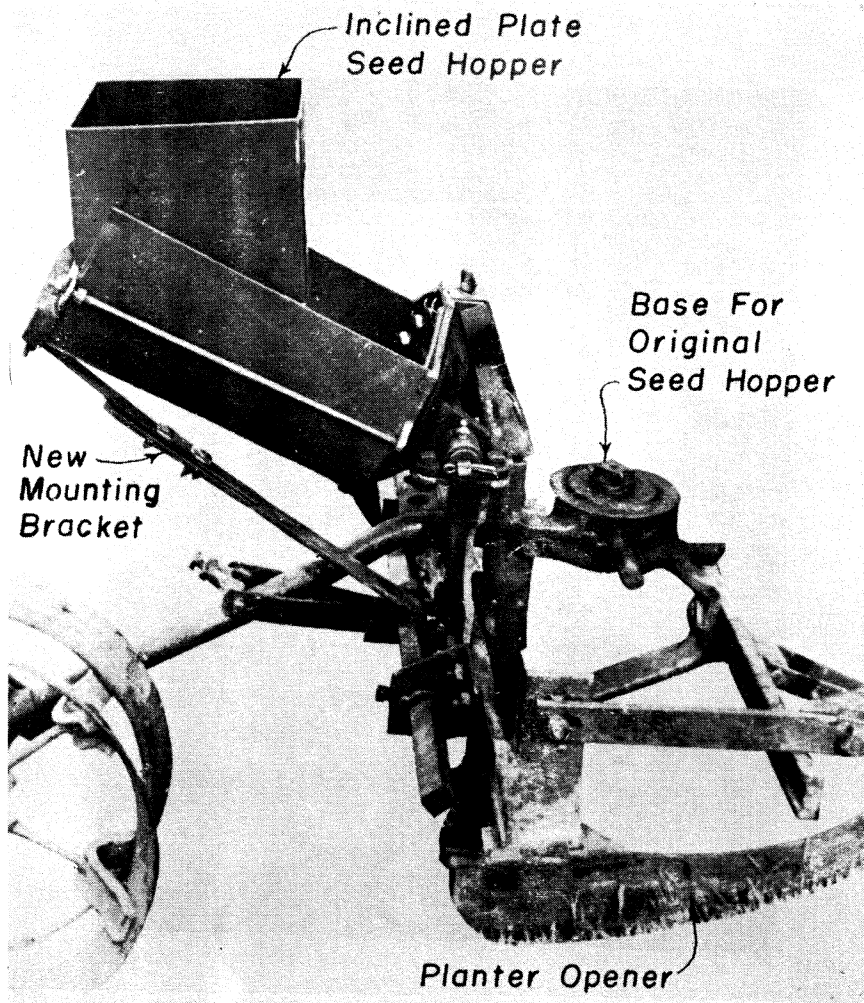


Figure 2 - Inclined plate seed hopper mounted above planter shoe spout.

A mounting bracket arrangement for the inclined seed hopper is shown below in figure 3. Different makes of planters will require some changes in the details of the mounting bracket, but most any welding shop man will be able to figure out a suitable mounting.

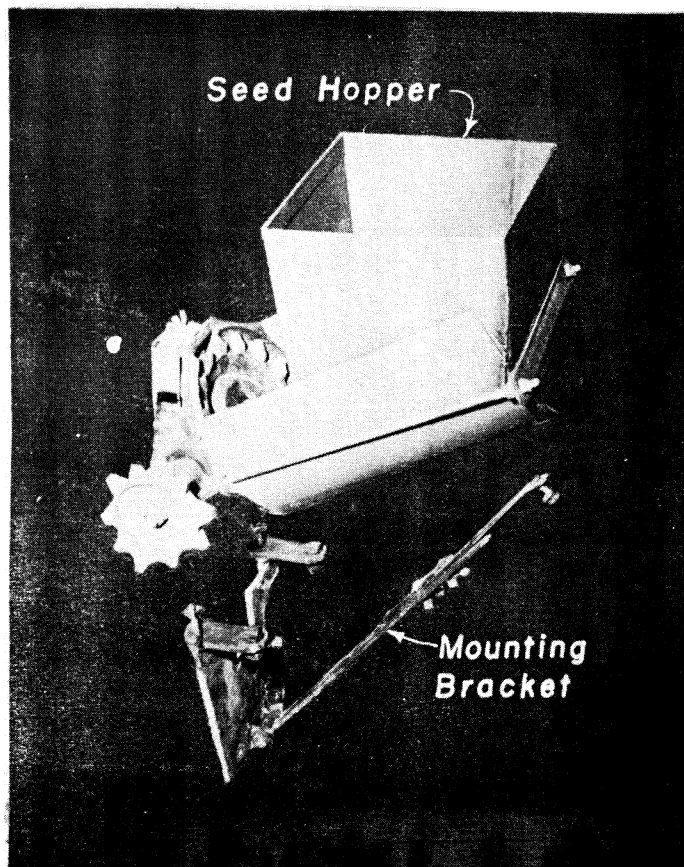


Figure 3 - Mounting bracket for attaching inclined seed hopper to planter.

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Agricultural Engineering Department\*

Importance of good stands: High yields of castor beans can be obtained only from fields having good stands. A good stand of beans means that the proper number of single plants is uniformly spaced in the row, with no skips or bunching of plants. If skips occur it is impossible to get the required number of plants per acre, and if the plants are bunched they compete with each other, some of the plants acting like weeds but producing no seed.

Recommended spacings of castor beans vary from one plant every 12 inches for most varieties grown under irrigation, up to one plant every 20 to 24 inches where Conner is grown under dryland conditions. U.S.D.A. 74 and Cimarron should be spaced about 16 to 20 inches apart unless they are to be grown under high moisture and fertility conditions; if so, they should have plants about 12 inches apart. Consult the agency supplying seed, county agent, or county P. M. A. office for recommended plant spacings for your conditions.

Increase rate of planting when seed have poor germination. In seed germinating 80 percent, one seed out of 5 will not grow. For this percentage of germination, the seed should be planted 20 percent closer than for seeds testing 100 percent germination.

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\* Material for this circular was furnished by L. G. Schoenleber and D. L. Van Horn, U. S. D. A. Bureau of Plant Industry Soils and Agricultural Engineering.

Adjustment, Care, and Use  
of Planter Seed Box

1. Mount seed box on planter as near the soil opener as possible.
2. Clean planter box parts of rust and rough edges before calibration, adjustment, or planting.
3. Select and use seed plate which drops a single seed at a time. It may be necessary to file the cups on the plate to accomplish this.
4. Seed plate speed should be slow enough so that seed will be picked up and dropped by the cups easily. Ground speeds from 2-1/2 to 4 miles per hour are recommended.
5. Adjust planter row width to method of harvesting planned, 40 inches for 2 row mounted harvester, 38 inches for two row combine.
6. Adjust planter to insure a plant spacing in the row as recommended for the variety in the area to be grown.
7. Remove unhulled seed as they accumulate in box above the seed plate.
8. Adjust the opening in the false bottom to keep about a cupful of seed in the bottom of the box at all times. The proper amount will vary with different boxes and different plates.