INVESTIGATIONS WITH THE CASTOR-BEAN PLANT: III. 
FERTILIZERS, CLIPPING, METHOD OF PLANTING, AND 
TIME OF HARVEST

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SEVERAL cultural methods other than rate and date of planting 
castor beans were studied cooperatively from 1941 to 1943 by the 
Bureau of Plant Industry, Soils, and Agricultural Engineering and 
state agricultural experiment stations. Among them were the use of 
fertilizers, the method of planting, the clipping or pruning of the growing 
point, and the time of harvest. Although these tests were conducted on a 
less extensive scale than the rate- and date-of-planting tests, the results were useful 
in making recommendations.

FERTILIZERS

Eight fertilizer tests were conducted, six in 1941 and two in 1943. 
The 1941 tests were located at Maple Hill and Parsons, Kans.; 
Arapaho and Stillwater, Okla.; Poplarville, Miss.; and Columbia, Mo. Five of the 
tests compared fertilizers applied to the Conner variety, while the 
Poplarville test compared fertilizer placements on the Scott variety (probably a selection from U. S. 4). The work was initiated late in the planting season of 1941, and the tests necessarily lacked uniformity in design and fertilizers used. The treatments and yields are listed in Table 1. In view of the usual magnitude of the difference necessary for 
significance in castor bean tests which are designed to permit statistical analysis, the yield differences between treatments in these tests are not believed to be sufficiently large to be considered significant. Thus, the 1941 data indicate that a profitable 
response would likely not result from application of fertilizers to castor beans, either before planting or as a side dressing after emergence.

The two fertilizer tests in 1943 were conducted at Lexington and 
Princeton, Ky. In these tests, which were of uniform design, only the 
Conner variety was used and nitrogen, phosphorus, and potassium were each applied alone and in all possible combinations at the rate of 250 pounds of 4-12-8 per acre. Plots were 4X10 hills in size with single plants spaced 3.5X3.5 feet, and only the center two rows were used for yield data. At Princeton the treatments were in quadruplicate and at Lexington they were in duplicate. The yields from these two tests are given in Table 2. The plot at Princeton was rather 
high in productivity, but it was thought that the fertilizers used in this test would have increased corn yields from 5 to 7% for each

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2Agronomist and Principal Horticulturist in Charge, respectively.
3Mimeographed reports D.R.P. 34, 35, and 40 give data in detail and summarize this work annually for 1941, 1942, and 1943, respectively.