

*Sent to Mr. Dodson  
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(Success Story)

FERTILIZER AND LIME EQUIPMENT EVALUATION

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In the spring of 1969 FCX, a cooperative that operates in North Carolina and South Carolina, requested that we evaluate the spread pattern of their presently owned equipment. They brought one of each of the different types to a central location at Clayton, N. C., for testing. This equipment consisted of five different makes of truck spreaders and four different pull type spreaders. The equipment was operated with the regular drivers, and the spread pattern collected. When the patterns were evaluated, it was discovered that none of the truck spreaders had a good pattern, and about half of the pull type spreaders had a good pattern.

A computer program was developed to help evaluate the spread pattern. With the aid of the computer, the results of one pass through the field could be converted to a final spread pattern at various swath widths, and the effect of driver errors could also be studied.

After further study of the results, it was decided to retest some of the spreaders to see if we could improve the pattern by making adjustments. The first test had been run by the drivers with the adjustments that they use for custom work.

The re-test proved that none of the spreaders could give a satisfactory pattern with lime and about half the trucks could not be adjusted for a good fertilizer pattern.

The manufacturers were contacted and given the results. Several manufacturers were interested in trying to improve their spread patterns. General Metals, Inc., of Greensboro was particularly interested, and it was agreed to work with them in further evaluating design changes. Larger diameter spinners with various vane designs were tested. It was discovered that the spinners had been positioned in the wrong location for wet lime. The spread pattern for both lime and fertilizer was greatly improved, but the swath width was limited. By tilting the spinner, a

considerable swath width increase was achieved.

The new design is far superior to the old and is now being offered for sale. Additional testing is being done to try to further improve the spread pattern. The basic information that was learned from these tests is also available to other manufacturers.