

## SPIRAL SEPARATORS SERVE USEFUL PURPOSE<sup>1/</sup>

By H. Dean Bunch<sup>2/</sup>

QUESTION: Please give us your experience as related to spiral separators. We need this type separator for removing vetch and peas from wheat. Most of the machines we have used will clog with dust and fine chaff and not feed.

ANSWER: Since we have not experienced this difficulty at the Seed Laboratory, we submitted this inquiry to several seedsmen who use these separators and to the Cleland Manufacturing Company, one of the companies manufacturing spirals. The seedsmen replied that periodic cleaning with an air blower or compressed air was necessary.

The president of Cleland suggested that the grain or seed be thoroughly cleaned by aspiration prior to spiral separating. Inasmuch as seed "makes its own dust" through handling, the air cleaning should be done just before the seed is run through the spirals. He also suggests that the operator check the cone cap to make sure that it is directly in the center of the hole. If the grain is fed unevenly to the inner flighting it may cause a concentration of the dust and chaff in one of the flights.

A motor driven agitator for keeping the feed opening in the hopper from clogging may be purchased for a very low price. So, if this is your trouble you may want to consider the installation of this agitator.

The spiral separator finds a useful place in many plants. It is built to separate spherical seeds from those which are not round. Some separation possible on the spiral can also be accomplished on other types

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of equipment when components in the seed mixture differ in other physical measurements in addition to degree roundness. For instance, because of length difference vetch and/or wild winter peas can be separated from oats by the disc separator or the indented cylinder as well as by the spiral. Some processors use the disc or cylinder to remove the vetch and peas from the cereal grains, then clean the non-round material such as splits and broken kernels lifted by the length separators.

Like all equipment the spiral separator has its limitations--it will not do everything. However, it is different from most equipment in that it uses no motor, gravity providing all of the motive power needed. When the seed mixture leaves the hopper it runs over a cone divider which spreads the feed evenly onto several spiral flights. On the travel down the spirals, the round seeds travel faster than the non-round material. This increased speed causes the round seeds to run over the edges of the spirals and drop to the housing spirals where they are discharged separately from the non-round seeds which did not run over the spiral edges. If the clogging problem can be satisfactorily solved, then the spiral separator needs no more attention than that supplied for supplying and removing the seed.

In a few weeks the Seedsmen's Short Course will begin. Most of the 200 persons who have attended at one time or another during the past seven years have indicated that attendance at the school is a week well spent. Anyone not receiving a program can receive one for the price of a post card addressed to us at State College, Mississippi.