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Every Seed Lot is a Special Processing Problem

H. D. Bunch

EVERY SEED LOT IS A SPECIAL PROCESSING PROBLEM[1]

By H. Dean Bunch[2]

Research at the Regional Seed Research Laboratory has shown that pigweed (Amaranthus) seed may be separated successfully from Ladino or white Dutch clover seed by use of the electrostatic separator. This information should be of special interest to growers and processors in those regions where pigweed is a source of heavy weed seed contamination. Processors of white clover are well aware of the physical similarities between the seed of this crop and pigweed seed. The similarities are so close that no mechanical methods of seed separation now used are effective.

In one test a lot of Idaho-grown Ladino clover contained 14,000 pigweed seed per pound. Passage through the electrostatic separator reduced the amount of pigweed to 54 per pound. A seed lot of white Dutch produced in Mississippi was made up to contain 96,000 pigweed seed per pound, all of which were removed electrostatically.

The equipment used in this test was a high tension laboratory separator manufactured by the Carpco Research and Engineering Company, Jacksonville, Florida. The pigweed seed was lifted with 40,000 volts, negative polarity, in an atmosphere of approximately 40% relative humidity. The moisture content of the seed was 7.5%.

This information is published as preliminary information in the hope that those processors who are troubled with the white clover-pigweed mixture will send 3 to 5 pounds of the seed mixture to the

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laboratory for separation trials. We solicit these samples because there are many varieties of pigweed and strains of white clover throughout the country. Some may not react to the electrostatic field in the same manner as do other varieties. In fact, as this is written two samples of California-grown Ladino containing pigweed have arrived at the Laboratory. A quick trial indicates that the separation of these lots will require a different set of conditions, if indeed the separation can be accomplished at all.

The excellent success in one or two instances and apparent failure in another emphasizes a point which every seed processor and researcher should bear in mind: EVERY SEED LOT IS A SEPARATE AND SPECIAL PROBLEM. You can generalize up to a point, but when the chips are down and you have to answer the question,"Can this mixture be separated?"--then there is no sure way of knowing until you have tried that particular lot.

Note: For a description of the electrostatic separation process, the reader is referred to the February issue of this magazine. Although there are construction differences between the Carpco equipment used in these tests and the Coronatron previously described, the basic principles of operation are essentially the same.

We cordially invite each of you to our annual Seedsmen's Short Course.