

WHY TEST SEED?¹

By Duane Isely and E. P. Sylwester²

"As you sow, so shall you reap." That's not an outdated proverb. Seed testing can help you make better use of that proverb on your farm.

As never before, it's important to know just exactly what kind of seed you're planting. To many, the "kind" of seed means "variety." But there are a lot of other factors affecting the kind or the quality of the seed you plant.

These factors include the germination, the purity, and the noxious weed content of agricultural seed. These things can be determined only by careful laboratory tests upon the seeds. Such tests are valuable to a grower if only because they give him a chance to get the most from his money spent for seed. They help to avoid pitfalls which might result in decreased yield or increased operating overhead. Let's see why such tests are valuable.

A germination test tells us what percentage of the seeds are alive and capable of producing good plants. If seeds won't grow, they're not fit for seeding purposes.

Anyone who unknowingly plants low-germinating seeds is faced with the necessity of an emergency replanting. Or, he may lose the use of his land for at least a part of the growing season. In addition, he's wasted the time and money used in the original seeding.

Maybe things like that are most likely to happen to this "other fellow" we hear so much about. But let's consider. About 5 percent of all oat samples tested in the Iowa State College Seed Laboratory in the last couple

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of years germinated less than 30 percent.

A seed test is worthwhile if for no other reason than to be sure your seed doesn't fall into a category like that. Many other seed lots examined in the laboratory germinated between 40 and 70 percent. If seeds like those are seeded out at the usual planting rate, a weak stand is the result. And a weak stand means a greater weed problem. Your yield is reduced both because there are fewer crop plants and because weeds fill in the vacant spaces and crowd out or compete with any crop plants that might have started to grow.

So, you see, it's helpful to know something about the germination in order to plan your planting intelligently and to make necessary adjustments in your seeding rate.

The purity test tells us the mechanical purity of the seed. For instance a certain lot of red clover may have only 90 percent pure seed, 3 percent other crop seed, 2 percent weed seed and 3 percent inert matter--chaff, trash and dirt. This means that out of every 100 pounds of clover seed, only 90 pounds are seeds of the clover, and the other 10 pounds are something else.

If you bought this seed for 60 cents a pound, you'd be paying \$6 per 100 pounds of seed for this additional material you hadn't bargained for. You'd be paying \$1.20 for 2 pounds of weed seed alone.

In many cases, the best seed to buy is the seed which is priced the highest. It often costs more because it is a higher quality product. Purity and germination are usually low in "bargain" seed. And the purchaser frequently ends up spending more per actual pound of live seeds than for more expensive seeds.

A third factor affecting seed quality is the presence of noxious weed seeds. The worst of these are termed primary noxious weeds by the Iowa

Seed Law. In fact, it's against the law to sell agricultural seed containing primary noxious weed seeds. Many of these pests--such as Canada thistle, horse nettle, Russian knapweed and perennial sow-thistle--are hard to get rid of once they're established.

It's much cheaper not to have such weeds in the first place than to have to eradicate them even by the best control methods. And remember, the main way that weeds get around is through distribution of their seeds in agricultural seed.

Let's consider this matter of noxious weeds in another way by comparing results of carelessness in regard to noxious weeds and crop variety.

Most farmers give careful consideration to the variety of the seeds they plant. Suppose you buy some cut-rate oats as just "oats." After the crop has matured, you find that these oats are one of our old varieties, Tama. Being disease-susceptible, Tama gives a poor yield in comparison with Clinton or Benton.

The loss in income from this bit of carelessness, however, will extend over only one growing season. The next year, you'll make sure of getting Clinton or one of the other new varieties.

Now let's take a similar careless mistake with noxious weeds. Say you have a chance to buy some bargain oats from a trucker or irresponsible dealer. He says the oats are good ones. He knows the fellow who grew them--they've been tested but he can't find the report right now.

You plant this seed and find out later that it was polluted with Canada thistle and horse nettle seeds. You didn't have these weeds on your farm before. This is a mistake which isn't so easy to correct the next year. You may continue to lose money for years to come because of loss in yield and the expense incurred for special control methods and for buying

chemicals. To avoid such costly experiences, make it a rule to buy seed only from dependable sources--seed which you know has been carefully tested for noxious weed seeds. The safest bet is certified seed.

All these reasons for testing seeds are related to common sense and good farming methods. If seeds are to be sold, there's another reason for testing them. The Iowa Seed Law requires it.

Many point out that the law can't watch all the farm-to-farm sales--that there's little chance of such movement being picked up by the Iowa Department of Agriculture. Remember that in selling untested seed, you're leaving yourself open to complaints. If the man buying the seed fails to get a good stand or if some new weeds show up in his field, he's almost sure to blame this on the seed.

The seed may not be at fault at all. The new weeds may have come from another source. But try to convince the customer of that! He may demand a settlement or write to the Iowa Department of Agriculture reporting the facts. In either case, you'll probably be in for some embarrassment.

A seed test protects both the buyer and the seller. But keep in mind that you, as a seller, are legally responsible for the test. It's your responsibility to take a sample of seed for testing which truly represents your seed lot.

Plant seed only of recommended varieties which have been shown by test to possess a high germination and purity and to be free from noxious weeds. When buying seeds, try to get certified seed. It has not been carefully tested, but has been subjected to rigorous inspection in order to guarantee trueness to variety.