

Foraging Around



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Let's Talk Seed Quality

Forage specialists agree that high quality seed of adapted species, varieties and mixtures is a very important spoke in your profitable forage wheel. And while it's important for all crops, it's especially important with small seeded legumes and grasses such as alfalfa and bromegrass. Seeds of these species are very small and contain very little stored food material. Thus, unless you start with quality seed and then follow up with good seeding practices, you can end up with a seeding

failure.

Seed Quality — What Is It?

Quality in seed can be related to the genetic quality, germination and mechanical purity of a given seed lot or the vitality of the individual seed. Let's take a brief look at each of these starting with germination.

By definition germination refers to the resumption of active growth by the embryo in a seed when conditions are favorable, generally resulting in a normal plant. Germination of live seeds

requires: (1) a permeable seed coat, (2) sufficient air, (3) favorable temperature, and (4) sufficient moisture. A fifth requirement, light, is also essential for many grass seeds as well as certain other crop seeds.

Mechanical purity refers to the percentage of pure seed, inert matter, other crop seed and weed seed. A frequent major limitation, for example, of home grown seed is that, based on many surveys, it's likely to contain excessive amounts of weed seeds and other foreign material and be of low mechanical purity.

Seeds of some of the warm season grasses, such as switchgrass and the bluestems, because of their characteristics, tend to be low in both germination and physical or mechanical purity. These are usually sold on the basis of pure live seed (PLS), which takes into consideration both germination and purity.

A seed with good vitality is one that not only germinates but also produces a seedling capable of developing into an adult plant. Many factors affect vitality, including vigor of parent plants, climatic conditions while the seed is maturing, seed maturity at harvest, seed storage conditions and age of seed.

Genetic quality, of course, refers to how well the variety you plant

will perform for you over its entire stand life. That's where improved varieties with good tolerance or resistance to the major pests that attack the crop really shine. Research has proven, for example, that over time a variety with good over-all pest tolerance or resistance for a given area will outperform the variety with high resistance to one pest, but with low or no resistance to others. Plant breeders call this multiple pest resistance.

Certified Seed

Historically, buying certified seed has been a good way to be sure you are getting the quality seed you pay for. And seed certification played a major role in setting seed quality standards for most major seed crops during the development of our great U.S. seed industry. Certified seed is of known heredity, identified as to variety, and traceable through records to a specific lot of breeder seed. It's especially important with publicly developed varieties. Today, however, many private seed

companies with their own varieties have their own excellent quality control programs equal to or superior to those of public certifying agencies.

The Plant Variety Protection Act (PVPA) passed several years ago offers further protection for named varieties of sexually reproduced plants such as alfalfa for which a certificate has been duly issued pursuant to the act. The Federal Seed Act makes it unlawful to sell non-certified seeds of a variety certified under the PVPA.

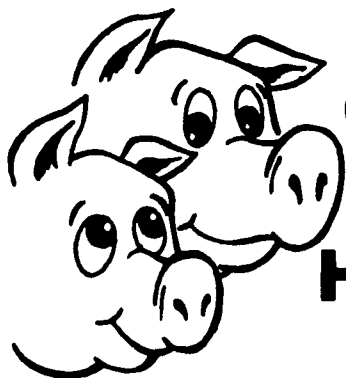
Figuring Seed Worth

Under any circumstances seed is a very small part of the total cost of growing a crop. In the Pennsylvania Alfalfa Growers Program, for example, seed cost represented less than 3½ percent of the annual cost of growing the crop. Thus, the bottom line for you should be — what will the return on investment be for a given variety over its stand life? — not what does seed cost per pound or unit. Cheap seed may indeed turn out to be the most costly in the long run.



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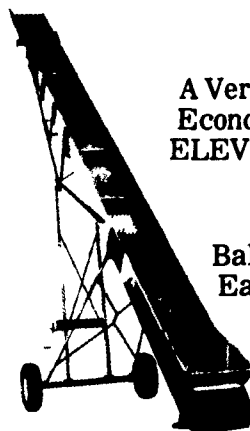
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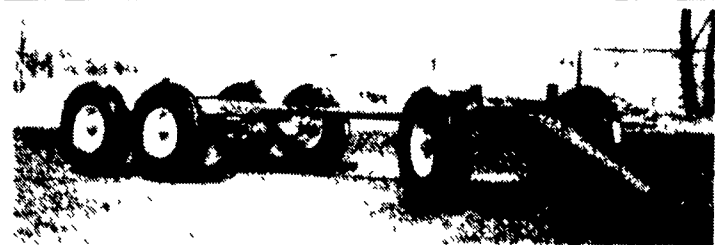
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