



Seed Terms and Definitions

Certified Seed - seed of a known variety produced under strict seed certification standards to maintain varietal purity. Seed lots must also meet specified standards for other crops, inert matter, weed seeds, and germination. Certified seed is also free from prohibited noxious weed seeds.

Coated Seed - the addition of chemicals to protect the seed from external damage or improve the germination with a film of external chemicals.

Pelleted Seed - a process in which small or irregularly shaped seeds are coated with an inert material to make seeds round and uniform.

Treated Seed- seeds that are treated with a chemical, typically antimicrobial or fungicidal.

Inoculated Seed- the process of adding effective bacteria or other biology to the host plant seed before planting.

Primed Seed – seed that is soaked in a liquid, allowing the seed to swell and begin the initial stages of germination. Nutrients may be used in the solution and is absorbed into the seed with the liquid.

Dormant Seed - an evolutionary adaptation that prevents seeds from germinating during unsuitable ecological conditions that would typically lead to a low probability of seedling survival. Dormant seeds do not germinate in a specified period under a combination of environmental factors that are normally conducive to the germination of non-dormant seeds. Viability of firm, ungerminated seeds at the end of the seed testing period is usually determined by a TZ test but other methods can be used.

Hard Seed - seed that is dormant due to the nature of its seed coat, which is impervious to either water or oxygen and does not swell or germinate within its established period of viability. A hard seed has a tough impermeable coat that does not allow water or air to reach the embryo.

Pure seed- a measure of the seeds in a seed sample that are the species claimed. Usually expressed as a percentage. Pure seed analysis does not verify the genetic purity.

Genetic Purity- seeds that have the inbred characteristics of the claimed variety. Genetic purity is usually not determined through visual examination and must be performed through some type of genetic testing such as electrophoresis.

Germination- the emergence and development of the seedling to a stage where the aspect of its essential structures indicates whether or not it is able to develop further into a satisfactory plant under favorable conditions in the field.

Total Viability- the sum of germination, hard seed, and dormant seed. Usually expressed as a percentage.

Pure Live Seed (PLS)- a calculation used to describe the percentage of a quantity of seed that will germinate. PLS is obtained by multiplying the purity percentage by the percentage of total viable seed, then dividing by 100.

TZ –(Tetrazolium Chloride)- a chemical test used to determine seed viability. Used when quick results are needed, or to determine dormancy at the end of a Dormant Seed test. Results are usually available within 24 to 48 hours but may be not as accurate as a germination test.

Test Date- a date that indicates when the seed lot was tested for germination. Seed germination rates can drop over time, even under optimal storage conditions. Seed lots are retested at specified intervals to make sure germination rates are current.

Other Crop Seed - percent by weight of a crop other than the seed species labeled. This does not include weeds. The crop seed must be listed by name if it is more than 5% of the content. This includes annual crops, and grass and forb species that are not the target species.

Weed Seed- percent by weight of weed seed in a lot.

Noxious Weeds- noxious weed species that are restricted or prohibited, as well as the maximum allowable amount of seed of restricted noxious weeds.

Restricted Noxious Weeds- noxious weed seeds that are allowed at a restricted level not to exceed a maximum of 27 such seeds per pound in Utah, either as a single species or in combination. (Other states may differ)

Prohibited Noxious Weeds- the seeds of any plant determined by state officials to be injurious to public health, crops, livestock, land, or other property and which is especially troublesome and difficult to control. No prohibited noxious weeds are allowed in any seed lot.

Brand - a name representing a trademark arbitrarily assigned by a manufacturer for marketing purposes.

Variety - an official name referring to the genetic makeup of the seed. This name is specified during the release process usually by the breeder of that variety.

Inoculants

Legumes can fix atmospheric nitrogen by a symbiotic relationship with Rhizobia bacteria. These Rhizobia infect the root hairs and form nodules where atmospheric nitrogen fixation occurs. This nitrogen is beneficial to the plant. Inoculant is readily available and inexpensive. When purchasing inoculant, be sure to treat it as you would a living organism. Keep it cool, out of heat, and sunlight. Check the expiration dates. and consider how inoculated seed has been stored. You may consider “over treating” your seed.

Rhizobia are species specific so one should never assume that the rhizobia are present in the soil and that the plants will automatically be inoculated. Seed should be inoculated with the correct type of Rhizobia. The different types are identified with an inoculant code. Here are some examples of what types should be used with differing legumes species. Alfalfa – type “A”, Red and White Clover – type “B”, Berseem Clover – type “R”, Sainfoin – type “F”, and Birdsfoot Trefoil – type “K”.

Inoculants come in varying brands. Common brands are Exceed, N-Dure, Nitragin and several others. Other seed treatments such as root inoculants are also available. These treatments are specific to the crop type and use a different bacterium for each crop.

For more info, search online for “[NRCS Legume Seed Inoculation](#)” in your web browser.