

News

Ryegrass testing procedures questioned, debated by members of seed trade industry

The value and validity of the fluorescence test, used to distinguish between annual and perennial ryegrass, is a great controversy among seed breeders, producers and distributors. A Ryegrass Symposium was held in April in Oregon to address the controversy.

Louisa Jenson, Emeritus, Oregon State University Seed Lab, was involved with the test from its inception and gave a history of its development. The test involves germinating suspected seeds and then examining the roots under ultra-violet light. Jenson remarked that the current ryegrass regulations regarding fluorescence testing were passed for efficiency at a time when few realized the significance. The Federal Seed Act is the only seed regulation in the world to include fluorescence testing requirements.

Clyde Edwards, administrator of The Federal Seed Act referred to a letter sent in 1973 requiring that the percentage of fluorescence be placed on the label. Clarifying the letter during the Oregon meeting, Edwards stated, "I was speaking about the new improved varieties of perennial ryegrass that are known to be totally non-fluorescent . . . We sent a memo out in 1973 from my office explaining this to seed analysts, seed control officials, and others. This has always been the implication that has been made of the fluorescent and the non-fluorescent ryegrass. To label the seed truthfully, if they are non-fluorescent we must deduct the fluorescent seedlings from the percentage of pure seed to calculate the correct percentage".

Comment was made at the meeting, from the floor, that because the test was considered nebulous and a committee had

been appointed by the American Seed Trade Association, that Edwards consider waiting until the committee report was finalized before rigidly enforcing fluorescence according to the 1973 letter.

Edward's comment was that the law was nothing new and that if it had not been fully implemented in the past, it did not change the law. "That law is there and it has always been the same."

Edwards went on to say that fluorescence is a negative identification procedure, where, taking Pennfine as an example, anything that fluoresces is determined not to be Pennfine. If it was suspected that two varieties of nonfluorescing perennials were growing in the same field, other steps would have to be taken to identify the mixture.

In a final panel discussion at the Oregon meeting, Dr. Joseph Duich, Pennsylvania State University and breeder of Pennfine, stated that fluorescence was an issue that some mistakes had been made on and that it was up to the seed industry to prevail with good sense in working the matter out. "Somehow we have to bring the ryegrass picture inline with truth in labeling."

Then, in June, the American Seed Trade Association met in Washington, D.C. During the Lawn Seed Division meeting, Chris Valentine, chairman of the Fluorescence Study Committee, gave the committee's report.

Summarizing the report, Valentine stated that, "Zero percent fluorescing seed is available on the market, but its value is questioned. The academic literature seems to indicate a very controversial area. The value overall is questioned. The identity of fluorescing

seedlings is controversial. The percentage fluorescence allowed is defined by the breeder. The presence or consequences of fluorescence was not proven to be harmful. It was clear that different varieties have different fluorescent allowances as defined by the breeder of each variety. It was thought to be unthinkable to dictate to the breeder the fluorescence he is allowed to release. It appeared to the committee that the current seed label presents ample information."

That summarized the majority report of the committee. However, appended was a minority report presented by Dr. William Meyer, research director for Turf-Seed, Inc.

Meyer stated that the parental clones of most of the presently available turf-type perennial ryegrasses (examples Manhattan & Pennfine) do not carry the genetic factor for fluorescent seedlings. When fluorescent seedlings are found in laboratory tests in lots of these turf-type perennial ryegrasses, they must be considered contaminants. He went on to say that the contaminants are "very objectionable because they usually germinate more rapidly than perennial ryegrass and have an upright rather than decumbent growth habit like the turf-type ryegrasses. In areas of the country without severe cold winters these coarse plants may persist for several years.

"If we don't express the fluorescent percentage as other crop on the seed tag we are misleading the consumer as to the genetic integrity of a seed lot for ryegrass content. The seed sent out by breeders for tests at public institutions is usually breeder's or foundation seed of the best quality available. If certified or commercial lots are sold with 4% or more fluorescence, will these perform as those plots in the public tests?"

A resolution approved by the Oregon Seed Trade Association and the Pacific Seedsmen Association was presented and passed by the Lawn Seed Division. The resolution read: "Whereas, regulations under the Federal Seed Act require fluorescent testing of

perennial ryegrasses; and whereas, a letter of interpretation of the fluorescent methods and formula was issued in 1973; and whereas, the ryegrasses producers, industry and technical seed personnel do not understand the interpretation as it was never enforced, and whereas there currently is disagreement between researchers and in the literature concerning the reliability of fluorescence as a factor for determining the difference between annual and perennial and varieties of perennial ryegrass; and whereas to accept the 1973 interpretation for calculation of fluorescence at this time for the 1979 crop would require changes in certification standards and be very costly to the producers, distributors and dealers; and whereas, the nonuse of fluorescence would have little, if any, effect on the purchases of ryegrass seed; now therefore be it resolved that a request be made to USDA, AMS, and FSA for a moratorium on the 1973 interpretation on the use of fluorescence on perennial ryegrass for kind or variety determination while a study is made of its reliability, practicality, and validity for use in making wanted determinations."

This resolution was also presented during the legislative meeting of the American Seed Trade Association and passed.

Whether the administrator of the Federal Seed Act will honor the resolution calling for a moratorium is doubtful, considering his answer when asked directly at the Oregon meeting. It is doubtful that he could, even if he wanted to, considering it is a law on the books, requiring Congressional action for change.

This is an issue that is not easily defined for the seed consumer. It will ultimately affect the price of seed and its quality. It is up to the seed industry to unite and develop a realistic testing procedure to tell the consumer what he is paying for.

With distinguished individuals within an industry severely disagreeing, it leaves the consumer wondering who to believe. The answer should come quickly from a united industry to cast away all doubts.

Ron Morris

Lawn Institute adds four new varieties

The Lawn Institute, during its annual meeting held in conjunction with the American Seed Trade Association meeting in Washington, D.C., added Ensylva fine fescue and Prominent

Creeping bent to their list of approved varieties. Fiesta and Blazer perennia ryegrasses were conditionally accepted during the 1978 meeting, pending additional data based on their application for Plant Variety Protection. Acceptance was made permanent this year.

The current approved list now includes the following:

Kentucky bluegrass

Adelphi	Majestic
Aboretum	Merion
Baron	Nuggett
Birka	Plush
Bonnieblue	Ram 1
Enmundi	Sydsport
Fylking	Touchdown
Glade	

Perennial ryegrass

Blazer	NK200
Citation	Omega
Derby	Pennfine

Diplomat	Regal
Fiesta	Yorktown II
Manhattan	

Fine fescue

Banner	Koket
Ensylva	Ruby
Highlight	
Emerald Creeping Bent	
Highlight Colonial bent	
Prominent Creeping bent	
Sabre <i>Poa trivialis</i>	