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September 26, 2001

MEMORANDUM

TO: Kathy Stewart-Williams
Idaho Foundation Seed

FROM: R.S. Zemetra 
Professor
Plant Breeding and Genetics

SUBJECT: Hubbard Foundation Seed

Regarding the presence of red seed in Foundation Hubbard foundation seed lot M-11-01F:

1. Hubbard is a selection from a cross between Hill 81 and Augusta, two soft white winter wheats. Both Hill 81 and Augusta have not been known to produce red variants.
2. The potential for out-crossing is low in wheat but could occur even with the 90 foot buffer zone required for breeder seed the year breeder seed was produced. Environmental conditions in 1999 could have increased the potential for out-crossing.
3. The possibility of contamination of foundation seed lot M-11-01F would be remote since the foundation seed field was well rogued. I also walked the field grown at the Moscow farm and did not observe any major variants in the field. With the mild winter, it is possible that there was some dormant spring wheat that volunteered in the field but this is a remote possibility since dormancy is not usually found in spring wheat and spring wheat was not grown in that field the previous season.
4. The level of red seed should not substantially increase in the registered and certified seed classes. If the source of seed was produced by an out-cross the number of red seed should stay relatively constant or decrease through both registered / certified seed production and subsequent generations due to segregation assuming equal survival and reproduction. Due to the low level of red seed the performance of the cultivar should not be reduced.

Recommended action:

1. Allow a variance of five (5) red seed/lb in Foundation Hubbard, lot M-11-01F. This variance would then allow six (6) red seed/lb in Registered and seven (7) red seed/lb in Certified Hubbard 96 produced from this Foundation seed lot.
2. Screen breeder seed for red seed and produce new breeder seed of Hubbard in the 2001-2002 growing season.

cc. Dr. Richard Heimsch