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Why Bin-Run Soybeans Don't Pay

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Dramatic increases in soybean seed costs for 2009 (25 to 109%) have many growers rethinking their soybean seed options. The most drastic alternative being floated in the coffee shops is brown bagging or planting "saved" soybean seed. Before a grower considers this option we must revisit the legal issues and agronomic considerations associated with this practice.

First we will address the legal issues surrounding planting saved seed. In Wisconsin alone 90% of the soybean crop planted in 2008 was herbicide tolerant (USDA –ERS, 2008). Herbicide tolerant varieties are classified as patented varieties or possess patented genes. "*If the variety is patented or has a patented gene, no seed may be saved for planting purposes and no farmer seed sales are permitted"* (Spears and Randy Weisz, 2004). Remember as a grower you agree to this statement when you accept delivery (legal statements are on the invoice and/or on the tags attached to seed containers). It is likely given the economic climate we are under that field monitoring procedures will be ramped up in 2009 to "catch" growers that plant patented varieties. It is also apparent that those growers that are caught will be prosecuted and fined to the legal extent of the law to discourage other growers from attempting this practice.

The remaining 10% of the soybean crop planted in Wisconsin that was not identified as herbicide tolerant will likely fall under the umbrella of either a patented variety (please see above for legal disclaimer) or under the 1994 Plant Variety Protection Act (PVPA) and Title V. "*Under this act, a grower may save seed of a protected variety for planting purposes. However, the amount of seed a grower can legally save is limited to the amount needed to plant his or her own holdings. Holdings are land owned, rented, or leased. If farm plans change that saved seed may be sold. The total of the amount planted and the amount sold, however, cannot exceed the quantity of seed needed to plant back on the farmer's own holdings"* (Spears and Randy Weisz, 2004).

If a grower has established the legal right to plant saved seed we must next address the agronomic considerations associated with planting saved seed. Essentially the "saved" soybean seed will be genetically identical to that they purchased. Therefore yield losses associated with saved seed will likely be due to seed quality issues related to harvest timing, storage conditions, and handling procedures. In a perfect world a grower would plan in advance which fields they intended to harvest for seed and implement the appropriate procedures to insure maximum seed quality (i.e. early harvest, proper dry down procedures and storage temperatures, etc.). Most growers that are considering planting saved seed in 2009 likely did not plan this activity in advance; therefore significant reductions in seed quality can be expected.

Most of the data related to planting saved seed was collected in the late 1980's and early 1990's. Significant advances in seed technology have been developed since this time so the yield differences listed below will likely be greater today. In North Carolina, Dunphy and Ferguson (1991) provided data on 204 saved vs. professional grown seed comparisons (16 locations, 6 years, 35 varieties). Dunphy and Ferguson found a 1.9 bushel advantage to certified seed over saved seed. In this paper Dunphy also sites Wisconsin data that indicated a 2.2 bushel advantage to certified over saved seed.

One strategy that growers may employ to improve the quality of their saved seed is to have the seed custom cleaned or conditioned. Remember *"it may be a violation to custom clean or condition seed of protected varieties"* (Spears and Randy Weisz, 2004). Seed conditioning encompasses many operations including the application of seed treatments and inoculants. If you offer these services make sure you certain you know the origin of the seed you are working with. If suspect you are cleaning or conditioning RR® seed keep in mind there is an ImmunoStrip that can quickly verify the presence of this trait. Custom cleaners and conditioning operations can further protect themselves through signed waivers.

Given the legal risks associated with planting saved seed coupled with the expected yield loss linked with this practice and the likelihood that most growers did not plan on saving seed I would strongly discourage growers from this practice in the 2009 growing season.

Literature cited:

Dunphy, J. and J. Ferguson. 1991. Field performance of farmer-saved and professionally-grown soybean seed lots. Proceedings of the American Seed Trade Association Annual Meeting.

Spears, J. and R. Weisz. 2004. Understanding Seed Laws and Regulations. *In*: Small Grains Production Guide. North Carolina State University Cooperative Extension publication AG-580.

USDA-ERS. 2008. Adoption of genetically engineered crops in the U.S., soybean varieties. http://www.ers.usda.gov/Data/biotechcrops/ExtentofAdoptionTable3.htm (webpage viewed and cited 12/24/08).