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Mr. Chairman, Members of the
Committee, for the record, my
name is Mike King

Date 2-4-05
SB 218

**TESTIMONY IN OPPOSITION TO SENATE BILL 218, INTRODUCED BY
SENATOR J. TESTER**

February 4, 2005.

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Mingling of Bio-Engineered and Non-Bioengineered Wheat in Montana

1. **Tolerances.** Zero tolerances especially self-imposed ones, for any contaminant in any commodity crop or seed crop are unfair, unreasonable, and impossible to enforce or manage. Reducing contaminants to biologically insignificant levels is relatively easy and is common to agriculture everywhere. Most, if not all, crops, including organic wheat and certified wheat seed have allowable tolerances for a variety of contaminants including animal feces. With realistic tolerances (e.g. between 1.0 and 5.0 %) a crop can meet its specifications and retain its value. The U.S. government and foreign governing bodies are developing such tolerances. It is unreasonable for any wheat crop to ask for zero tolerances for any other type of wheat including bio-engineered wheat.
2. **Segregation.** Many grain crops are successfully segregated and identity preserved. Malt barley is always segregated from feed barley and other grain. Malt barley storage facilities, such as Coors, routinely take precautions to make sure that no wheat seed or other grain contaminates their malt barley, sometimes even vacuuming rail cars at their own expense. Durum wheat has different end uses than hard red spring wheat and is routinely segregated. Some pasta manufacturers (e.g. Pasta Montana) ask for and pay premiums for specific durum varieties, of course these need to be kept separate as well. Some flour mills will pay premiums for hard white spring wheat, again this wheat will be kept separate from all other wheats. The contention in SB 218 that "genetically engineered wheat cannot be successfully segregated from wheat that is not genetically engineered" is false. If there are reasonable tolerances set for the presence of GMO wheat then the two can co-exist. Levels of GMO wheat at 1.0 to 5.0 % are of no biological or practical significance. Such tolerances are common in agricultural trade. One other note on organic wheat. It is the process of growing such wheat that is guaranteed. It is raised without the use of pesticides, inorganic fertilizers etc...it is not claimed to be pesticide free i.e. with absolutely no detectable levels of any pesticide, in other words with a zero tolerance, and it would not lose its organic certification if miniscule amounts of herbicides for example were found in the grain for whatever reason.

3. **Pollen Drift.** A gene from one wheat variety can move to another wheat variety by physical movement of pollen. This is called “out-crossing”. Here are some points to consider:
- a. Out-crossing in wheat is low. One study found that “intra- and interspecific pollen-mediated gene flow rates remained below 0.5% and declined rapidly with distance from the pollinator”. These researchers also found that “no evidence of interspecific gene flow was observed at more than 40m from the pollinator”. This suggests that buffers and or tall barrier crops would greatly reduce contamination of a neighboring crop by pollen mediated gene flow.
 - b. Wheat pollen is not very aerodynamic and thus is unlikely to travel very far.
 - c. Tolerances, i.e. allowable levels of various contaminants exist for most agricultural commodities including organic wheat and certified seed. The U.S. Federal Seed Act allows a company to label a product as a single hybrid or variety with up to 5% of the seeds in the bag as off types.
 - d. For one segment of agriculture to try to enforce a self-imposed zero tolerance on the rest is unreasonable, unfair, and contrary to common agricultural practices. Saddling other in agriculture, be they manufacturers of seed traits, sellers of seed or even neighbors with costs or penalties due to biologically insignificant, unrealistic and self-imposed standards does not make common sense

4. It is the responsibility of the grower of a specialty crop to make sure it meets the standards for that crop. A malt barley grower must take precautions to keep his malt barley segregated. Growers with seed contracts must take care to control volunteer plants, control weeds, and keep the harvest separate. In return for their efforts, growers of specialty crops, e.g. organic wheat obtain premiums for their products. Here’s a hypothetical question to ponder. Let’s say a new genetically engineered wheat variety is commercialized that people with celiac disease (i.e. gluten intolerance) can eat without causing health problems. [Celiac disease impacts over 2.0 million people in the U.S.!] If this “celiac” wheat is contaminated with other wheat, even organically grown wheat, and even at low levels, people with celiac disease that ate it would suffer. Using the logic of SB 218, would the growers of organic wheat (or their seed providers!) who failed to prevent pollen flow from their organic wheat to the “celiac” wheat be liable for damages to the grower of the “celiac” wheat? Would they be liable for the human health consequences? The answers are pretty clear. No! The grower of the “celiac” wheat has the responsibility to ensure that his wheat is grown far from normal wheat and is kept strictly free from any other wheat, free at least to the standards set by the buyer, standards that would be too low to cause gluten intolerance. If the premiums paid are high enough, the grower will likely gladly go to such lengths.

Summary.

Biotech wheat and ag biotechnology in general hold great promise for Montana. Properly funded and encouraged it will be the key for rural revitalization in Montana. Family farms will prosper because these new specialty crops will require higher levels of management and will likely be grown on smaller acreages than our current commodities. SB 218 is a "wolf in sheep's clothing". While it purports to protect farmers, it will do the opposite. Its wider aim is to stop ag biotechnology in Montana. It will take away the opportunity to grow high value specialty wheats that will command premium prices and hopefully be processed in Montana. It will send the message to entrepreneurs and University researchers alike that Montana is satisfied with the status quo, not open to innovation, and antagonistic to emerging businesses. We've got great researchers at MSU working on enhanced traits in wheat and in fact some of these traits are ready for licensing to companies large and small. Our competition in surrounding states and Canadian provinces are already ahead of us. Please don't let us fall by the wayside of this important emerging technology. I ask you to vote down SB 218.