EXHIBIT 7
DATE 2/10
HB 547

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Agricultural Experiment Station
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February 9, 2005

Senator Jon Tester
President Montana Senate
P.O. Box 200500
Helena, MT 59620-0500

Representative Ed Butcher
Chair House Agriculture Committee
P.O. Box 200400
Helena, MT 59620-0400

Dear Senator Tester and
Representative Butcher:

I have been contacted by numerous individuals in the agricultural community relative to HB 405, HB 547 and SB 218. In addition, I have visited directly with Cody Ferguson of the Northern Plains Resource Council. As an information source, I thought that it would be prudent to provide some examples of research products that would potentially be impacted by the above legislation. Although the above legislation addresses several issues, I will address one, the definition of manufacturer in each piece of legislation, and how it would impact research and economic development. The definitions do slightly differ in each, but the application to research is the same. Dr. Tom McCoy, Vice President for Research, Creativity and Technology Transfer and Jeff Jacobsen, Dean of the College of Agriculture and Director of the Montana Agricultural Experiment Station have reviewed the above egislation and from a research perspective, feel that it would negatively impact various research programs and, ultimately, technology transfer, licensing and economic development.

MSU develops technologies which are patented and then icensed. Two current technology examples are attached that are ''real'' and would make MSU a manufacturer and, therefore, liable in a number of ways depending upon which bill was being considered. Research is not addressed in these bills. Although it is pure speculation, I am confident that the research products outlined in the attachments would not have taken place at MSU, if these bills were already in place as written. If an avenue of research is terminated or never initiated, it takes time to build the program and frankly, one never catches up. Although it spans beyond the direct aspect of research impacts, we wonder about the role of federal regulatory agencies and the potential for abuse (and ability to document the abuse) with genetically engineered wheat as it moves in the food distribution system. It would appear that the manufacturer would be responsible and in the attached cases, that would be MSU.

I hope that this adequately addresses the research related concerns on the above bills. I do not have solution(s), but wish to point out the negative impact on research as they are written. I would be happy to be an additional information source, if desired.

Sincerely,

Jeff Jacobsen
Dean and Director

C: Tom McCoy
Geoff Gamble
Cathy Conover

MONTANA STATE UNIVERSITY BOZEMAN

Technology Licensing Opportunity

New transgenic seed lines show improved plant production by increasing seed yield and plant biomass.

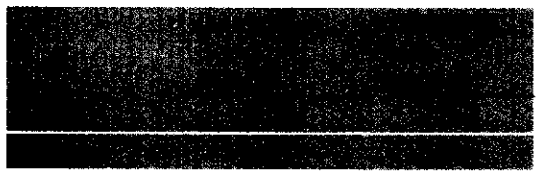
Increased Agronomic Yield through Enhanced Seed Sink Strength and ADP-glucose Pyrophosphorylase Activity

Technology Description

By transforming seeds with a modified form of the maize *Shrunken2* gene (*Sh2r6hs*) researchers have produced wheat and rice lines with plant biomass increases of 31% and 23% respectively in yield trails. The *Sh2r6hs* transference is expected to produce similar improvements in almost all agronomic and ornamental plant lines. *Sh2r6hs* transformation results in increased expression of ADP-glucose pyrophosphorylase (AGP), an enzyme that controls the rate-limiting step in the starch biosynthetic pathway.

Montana State University researchers and collaborators transformed wheat and rice with the maize *Sh2r6hs* AGP large subunit sequence that combines the *rev6* alteration conferring reduced negative allosteric inhibitions with a single point mutation (*hs*) conferring enhanced large AGP subunit small AGP subunit interactions. Increases in seed yield and plant biomass result from increased seed AGP activity which increases seed sink strength and stimulates overall plant growth. In *Sh2r6hs* wheat and rice, rates of photosynthetic CO_2 fixation are increased in flag leaves, the most important source tissue for developing seeds. Seed-specific *Sh2r6hs* expression also results in up regulation of native starch and protein biosynthetic gene expression. Increases in photosynthesis and starch and protein gene expression occur during the period early in seed development when seed number is determined. The results indicate that agronomic yield can be increased by modifying seed sink strength.

Performance of *Sh2r6hs* Transgenic Plants



Benefits

- Improved seed weight
- Improved biomass
- Increased agronomic yield from strengthened seed sink
- Potential improved Harvest Index of plants

Technology Transfer and Development Status

The technology is patent pending and research publications are available. The researchers are available for further development.

Contact for licensing or further details

Nick Zelver, MSU Technology Transfer Officer, 406/994-7706, nzelver@montana.edu

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Technology Transfer Office
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MONTANA STATE UNIVERSITY BOZEMAN

Technology Available for License

Control of seed grain hardness for improved cereals in both agricultural feed and commercial food products.

Technology for controlling seed grain hardness has broad applications in wheat, barley and corn in animal feed and human food products

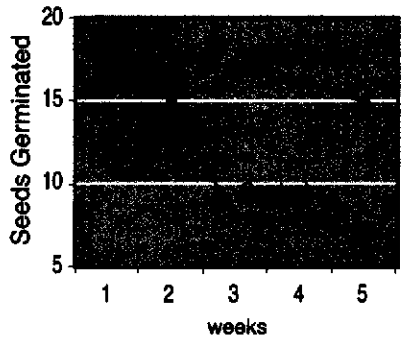
Technology Description

Expression of a protein that controls grain hardness has been demonstrated by Montana State University researchers to show potential improvements in cereal grain. Controlling grain hardness promises to provide enhanced grain production, storage, digestibility, and palatability for applications of barley and corn in animal feed, ultimately providing improved animal weight gain. Controlling grain hardness could also provide benefits in human cereal food products through more efficient milling or improvements such as finer textured flours, advancements in barley malting, or enhanced starch extractability from corn.

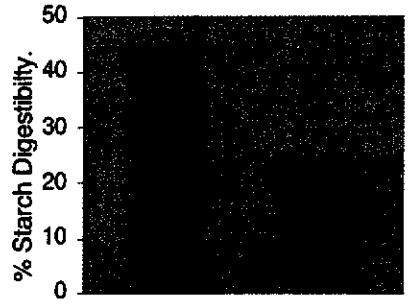
MSU researchers have shown that over expression of the protein in wheat results in decreases in (a) grain hardness (b) decreases in grain spoilage and (c) decreased starch digestion in the rumen of cows. Similar outcomes are expected in barley and corn.

Montana Hard Red Spring Wheat	Single Kernal Hardness Characterization
Control	81
With Genetic Transformation	16.84

(a) Example of reduced grain hardness in Montana Hard Red Spring Wheat when genetically transformed.



(b) Example of reduced seed decay from induced *Penicillum* infection based on seed germination of Montana Red Spring Wheat.



(c) Example of starch digestibility of Montana Red Spring Wheat incubated in in nylon bags in the rumen of cannulated cows.

Benefits

- Reduced grain spoilage and more efficient grain milling
- Better weight gain in animals from delayed starch digestibility and palatability of feed grains
- New and improved human food products through such attributes as increased starch recovery in corn milling, finer textured flours and better barley malting.

Technology Transfer and Development Status

Patents are available and pending. The MSU researchers are available for further development.

Contact for licensing or further details

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