

# **MEETING TO BE HELD**

## **Opportunities for Hulless Barley as a Livestock Feed**

**March 3, 2017**

**Virginia Tech Alson H. Smith, Jr, Agricultural Research and Extension Center  
595 Laurel Grove Road  
Winchester, VA**

### **Organized by:**

**Dan Brann, Retired Extension Grains Specialist, Va. Tech; and Bruce Beahm, Retired Va. Crop Improvement Association, Virginia Identity Preserved Grains; Keystone Agricultural Group Seeds; Virginia Tech; and, Penn State University**

A meeting will be held on Friday, March 03, 2017, at the Virginia Tech Alson H. Smith, Jr. Agricultural Research and Extension Center located at 595 Laurel Grove Road, Winchester, Virginia. This educational effort related to hulless barley is being planned by Virginia Identity Preserved Grains, Keystone Agricultural Group Seeds, Virginia Tech and Penn State.

Hulless barley is the same as traditional hulled barley except the seed hull starts to crack as the grain matures. The hull is then removed during harvesting to give a grain that has been shown in research to be equal to corn for many types of livestock. Hulless barley has 60-63% starch, 11-12% protein, a 56 lbs./bu. test weight, and about 2-3% fiber.

Registration for the meeting will begin at 9:45 a.m. The program will start at 10:00 a.m. with opening remarks by Dr. Dan Brann, Retired Extension Grain Crop Specialist Virginia Tech. There is no registration fee and lunch will be provided by the Virginia Crop Improvement Association.

Dr. Carl Griffey, Small Grains Breeder at Virginia Tech will begin the program by discussing progress of the hulless barley breeding program from release of 'Doyce' hulless barley in 2003 to the release of 'Amaze 10' hulless barley in 2013. Dr. Griffey's barley breeding program, supported by Mr. Wynse Brooks and Mr. Mark Vaughn, is the only comprehensive barley breeding program in the Eastern U.S. Progress in the breeding program is evident by the fact that 'Amaze 10' averaged 5,000 lbs./acre and 'Doyce' averaged only 4,100 lbs./acre over three years (2013-2015) at the Eastern Virginia Research

Station. At Blacksburg, in the Southwestern Virginia Mountains, over the same three years 'Amaze 10' averaged 5,100 lbs./acre compared to 4,200 lbs./acre for 'Doyce'- a 22% increase in yield. In addition to improved yields, 'Amaze 10' also averages over 58 lbs./bushel test weight compared to 55 lbs./bushel for 'Doyce'. 'Dan' released in 2009 has the best test weight of the hulless varieties released , but has yielded about 10 bu./acre less than 'Amaze 10'. Dr. Griffey will present data on recent advances in the breeding program and the research that is currently being done to improve grain yields, disease resistance, and other important traits such as starch levels in the grain.

Dr. Wade Thomason, Extension Grain Crop Specialists at Va. Tech and Dr. Greg Roth, Corn Management Research and Extension at Penn State, will then discuss the barley management research they have been conducting in recent years evaluating varieties, nitrogen management, and other practices to improve the economics of growing barley.

Starting about 11:00 am Mr. Joe Anchor, owner of Keystone Agricultural Group Seeds in New Columbia, Pennsylvania, will lead a panel of hulless barley users including Mr. Dean James of Cotner Farms, Mr. Melvin Leshner of Leshner Poultry, and Mr. Bill Rasche of Rasche Brothers Farms. Mr. Anchor and Mr. James are responsible for introducing hulless barley to Pennsylvania livestock feeders and growers in 2007-2008. Dedication to developing crops that improve the agronomics and economics in their area led Mr. Anchor and Mr. James to evaluate the production of hulless barley and its inclusion as a feed ingredient for the Cotner's laying hens. Cotner Farms, a fourth generation family farm near Danville, Pennsylvania, currently grows about 8,000 bushels of hulless barley and purchases about 28,000 bushels of hulless barley annually to include in feed for their laying hens. Hulless barley is an important ingredient in Cotner Farms program to feed their laying hens a vegetarian diet of premium feed made daily at their feed mill. Joe Anchor has also been instrumental in Leshner Poultry Farms, an egg producer in Chambersburg, Pennsylvania, using hulless barley in their feed. Rasche Brothers Farms in Taneytown, Maryland, has also been feeding hulless barley to their beef cattle since 2011 and are growers of HB seed.

The last speaker before noon will be Mr. C. R. Freeman of Lone Wolf, Oklahoma, founder of Premium Beef and Grain and Pure Beef. He has developed two natural beef lines that utilize hulless barley. The Premium Beef and Grain is a grain-fed, natural, never ever beef line. Pure beef is a grass-fed, natural, never-ever, Non-GMO beef line. It is a complete program that is economically successful for the entire beef production chain from the farm and ranch all the way to the consumer's plate. Mr. Freeman started feeding Virginia Tech-developed hulless barley in his feed lot in 2006. His success in growing and feeding Virginia Tech-developed hulless barley varieties has led him to plant, or have planted for him, over 20,000 acres this year of mostly the Amaze 10 variety of hulless barley. 'Amaze 10' has produced yields exceeding 6,000 pounds of grain or over 12 tons of silage/acre dry land.

The test weight is generally about 58-59 lbs./bushel, and it is easy to roll when milled. He grows about 80% hulless barley because of the greatly improved test weight, yield and ease of harvesting. Mr. Freeman feeds hulless barley because it is at least partially responsible for producing the premium quality beef his customers require. "Since feeding the hulless barley, our cattle produce a much whiter fat that is preferred by our customers". Also, "hulless barley works well in our more arid environment out West, cost of production is much cheaper than corn, yet the performance in the cattle is pretty close to on par with corn". Mr. Freeman is paying his grain producers 100% of corn on a lb./lb. basis or 85% on a bu./bu. basis since corn trades on a 56 lb. bushel and hulled barley trades on a 48 lb. bushel.

After the lunch sponsored by the Virginia Crop Improvement Association, Dr. Michael Persia, Department of Animal and Poultry Sciences will discuss recent research he has done evaluating hulless barley for broilers.

The focus then shifts to evaluation of hulless barley for dairy. Dr. Gonzalo Ferreira, Department of Dairy Science at Va. Tech just completed two in-depth feeding trials in the newly completed dairy research facilities at Va. Tech. Results from the first study show that hulless barley is at least equal to corn on a lb./lb. basis as a feed ingredient for high producing dairy cows. The second study compared hulled and hulless barley. Data from the second study is being analyzed and should be available to be presented at this meeting.

The formal portion of the program will conclude with a panel of two dairy producers in Virginia that have experience with growing and feeding hulless barley on their farms. Mr. Kevin Phillips and his brothers in Augusta County near Waynesboro, Virginia have been growing and feeding barley to their milking herd for decades. Kevin likes the cropping system benefits of growing barley for silage or grain followed by double crop soybeans. Kevin likes hulless barley, but currently is growing mostly hulled barley. Mr. Joe Motley of Motley Dairy in the Southern Piedmont Area near Danville, Virginia also grows both hulled and hulless barley for his milking herd. The cropping system benefits of having another grain crop and double cropping are tremendous, especially in an area of the state where drought can greatly reduce corn yields. The Motley's are currently growing hulless barley on about 300 acres or about 80 percent of their barley acreage. Joe is very happy with the way the hulless barley handles and feeds.

The remainder of the program will be dedicated to comments, questions, and general discussion by attendees with adjournment about 3:00 pm.

Again, there is no registration fee but please contact Bonnie McCauley at the Virginia Crop Improvement Association at 804-746-4884 or [bonniemccauleyvicia@yahoo.com](mailto:bonniemccauleyvicia@yahoo.com) to help us with meeting and lunch plans. Dan Brann can be contacted with any questions at [debrannfarms@gmail.com](mailto:debrannfarms@gmail.com).