

SMALL GRAIN grower



KENTUCKY
Small Grain
GROWERS' ASSOCIATION

Fall 2010

No-Till Gains Edge in Kentucky Wheat Yield Contest Yields Outperform Conventional Tillage Wheat Last 4 of 5 Years

More growers now use no-till wheat production for energy savings and soil improvement, but higher yields may also be an added incentive over conventional tilled wheat. At least that is the picture painted by the results of the Kentucky Wheat Production Contest for the past five years.

According to Chad Lee, University of Kentucky extension grain specialist and wheat production contest coordinator, the average winning no-till yields are about four bushels higher than conventional-till yields. The average winning yields for the last 10 years are about equal for no-till versus conventional.

"The yield contest demonstrates that producers in Kentucky have learned how to manage wheat in no-till systems," said Lee.

The University of Kentucky added the no-till category to the wheat contest in 1997. In the last 14 years, half of the highest yields were achieved using no-till. No-till was also used to produce Kentucky's 2008 record yield of 130.61 bushels per acre.

KySGGA has been a long-time supporter of no-till research studies and is excited to see growers benefit from work funded by checkoff contributions.

Lee said there are some situations, however, where tillage is necessary, such as lack of rainfall.

"There will be a lot more tilled wheat this year," said Lee. "The ground is too hard for no-till in many areas."



For the second year in a row, Peterson Farms earned the highest yield in the state using no-till. Pictured from left to right, Bernard Peterson, David Peterson, Albert Peterson and Bill Peterson.

2010 Kentucky Wheat Production Contest Results

State Champion

Division	Name	County	Variety	Yield, bu/acre
No Till	Peterson Farms	Marion	AgriPro Coker Branson	104.13
Conv. Till	Goetz Bros. Farms	Daviess	So. States SS8302	100.92

Area Champion

Area 1	Double P Farms	Todd	AgriPro Coker Branson	95.05
Area 2	Beanland Farms	Daviess	AgriPro Coker Branson	100.81
Area 3	Chris Kummer	Simpson	AgriPro Coker Branson	97.11
Area 4	Williams Farms	Wayne	Exsegen Dina	98.13*

*denotes a No-till entry

All contest winners will be recognized at the 2011 Kentucky Commodity Conference, January 21, in Bowling Green. KySGGA sponsors the trophies and awards.



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KySGGA
P.O. Box 90
Eastwood, KY 40018
1-800-326-0906

www.kysmallgrains.org

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Message from Sam Hancock, KySGGA President

Working Together for the Success of Kentucky Agriculture

I am a true believer in the building of partnerships for maximum success. The Kentucky Small Grain Growers Association has worked with many willing and dedicated partners in the areas of research and crop management. Staff from the University of Kentucky, Miles Opti-Crop and Wheat Tech, Inc. have put in countless hours over many years to discover what will help our small grain growers the most. They then conduct the research with the assistance of grower partners and finally share the results so it can be put into practice. Kentucky's wheat and small grain industry has seen some tremendous advancements due to our teamwork.

Sometimes, however, we need to venture out from under our "crop farmer" hat and think about the success of the entire Kentucky agriculture community.

Most recently, we became a member of the new **Kentucky Livestock Coalition** (KLC), joining several other state commodity associations and agricultural businesses to protect and promote the image of Kentucky's livestock industry and its contributions to the state.

It is also the goal of the coalition to help disseminate information and recommendations of the Kentucky Livestock Care Standards Commission which was named in August by Governor Steve Beshear. The commission was formed to advise the state Board of Agriculture on standards governing the care and well-being of on-farm livestock and poultry. This is an important step in showing our consumers that we are all committed to advancing environmentally friendly, socially responsible and economically viable livestock farming practices, while providing safe and affordable food.

I am proud to have KySGGA director Michael McCain serving on the KLC Board of Directors as the Secretary/Treasurer. Our KySGGA staff are also involved in KLC programs helping us become an important contributor to the Kentucky agriculture equation and a strong team player.

We are all expending more effort these days to defend our operations, our products, and our way of life. Working together will help us do that more effectively.

FY 2009/2010 Annual Report			
Fiscal Year from June 2009 through May 2010			
INCOME		EXPENSES	
Net Checkoff	\$241,186.74	Research	\$127,401.22
Interest	\$2,517.30	Education	\$28,551.58
Misc.	\$955.86	Promotion	\$23,259.64
		Admin.	\$24,547.48
Total Income	\$244,659.90	Total Expenses	\$203,758.92
Carryover to 2010/2011 - \$40,900.98			

DC Urban Wheat Field Reaches Lawmakers and World

The wheat industry came together in September to show the public and Members of Congress the wheat chain from farm to fork at the second Urban Wheat Field.

The Wheat Foods Council sponsored the event, supported by wheat producers from around the country who flew in to guide visitors through the exhibit.

The display included a quarter-acre of live wheat in pallets, a full-sized combine, multiple demonstration flour mills, a mobile baking laboratory and areas for trade and nutrition education. The event was staffed by more than 60 growers and 20 state organization staff who came in for the festivities, as well as D.C.-based staff from the National Association of Wheat Growers (NAWG) and U.S. Wheat Associates and experts in the areas of milling, baking and nutrition.

The Field opened on September 23 with a reception sponsored by NAWG and highlighted by House Agriculture Committee Chairman Collin Peterson (D-Minn.), who cut the ribbon alongside NAWG President Jerry McReynolds, a producer from Kansas, and Wheat Foods Council Co-Chairman David Moore, a producer from Texas.

In addition to Peterson, Members of Congress in attendance included Rep. Jerry Moran (R-Kan.); Rep. Adrian Smith (R-Neb.); Rep. GT Thompson (R-Pa.); and Sen. Michael Bennet (D-Colo.).

Earlier in the week, as the Field was being set up, growers and staff from NAWG-affiliated state wheat grower organizations canvassed Capitol Hill with milling and baking colleagues, holding more than a dozen meetings with Congressional staff members who don't frequently hear from wheat growers. Peterson and House Agriculture Ranking Member Frank Lucas (R-Okla.) also sent a Dear Colleague letter to their fellow Members describing the event and urging attendance.

Once open, multiple school groups visited the Field, guided by wheat producers from around the country.

NAWG officers and other spokes-people also talked with members of the media who visited the Field to get the once-in-a-lifetime shot of a combine in front of the Capitol and with many radio stations and newspapers back home. Media covering the Field in D.C. have included ABC and NBC affiliates, USAToday.com, Agri-Pulse and others.



ABOVE: Ag Committee Chairman Collin Peterson (D-Minn.) speaks at the Urban Wheat Field opening ceremonies. BELOW: A Wheat Foods Council representative teaches the visiting school children about wheat production and whole grains in a healthy diet.



Congratulations, Fergus McCain, of Washington County. McCain was the winner of the 2010 Kentucky FFA Grain Production Placement award. KySGGA sponsored the contest and scholarship awards.

KySGGA Selects Research for 2010-2011 Growing Season

Brings total dedicated to wheat and small grain research in Kentucky to nearly \$1.7 million

In August, the Kentucky Small Grain Growers Association and Promotion Council selected the research projects that will receive Small Grain checkoff funding for the 2010-2011 growing season. The new round of projects brings the total dedicated funding toward research to more than \$1.7 million since the checkoff was initiated in 1992.

Below is a summary of the research projects selected.

CONTINUING PROJECTS

Soft Red Winter Wheat Breeding and Variety Development

Primary Investigator: David Van Sanford, University of Kentucky

The goal of the University of Kentucky wheat breeding program is to increase profitability of Kentucky's wheat production by developing and releasing improved wheat varieties. The breeding program targets economically important traits including yield, test weight, scab resistance and reduced lodging, among others. Significant progress towards these goals requires long term, sustained effort and commitment.

2010 Funding: \$47,650

Total Funding to Date: \$684,197

Wheat Yields and Varying Row Widths

Primary Investigator: Chad Lee, University of Kentucky

The goals of this project will be to compare yields planting one variety in 15 inch, 7.5 inch and 3.75 inch rows (with and without residue).

2010 Funding: \$2,500

Total Funding to Date: \$17,500

Performance of Small Grain Varieties in Kentucky

Primary Investigator: Bill Bruening, University of Kentucky

Small grain production is an important component of Kentucky's agricultural economy. New wheat and barley varieties are continually being developed by breeders. In order to maximize the profitability of small grain production, annual evaluation of varieties is needed to help farmers select varieties with superior agronomic performance.

Grain yield and test weight, as well as straw and forage yield are directly related to crop income, but varietal traits, such as plant height, lodging potential, maturity, and disease resistance are also important management-related components of profitability. The UK Small Grain Variety Testing Program annually evaluates the agronomic performance, general adaptability and pest resistance of small grain varieties grown in Kentucky.

2010 Funding: \$15,150

Total Funding to Date: \$71,150

Improving Nitrogen Application Technology Under Kentucky Conditions

Primary Investigator: Lloyd Murdock, University of Kentucky

The objective of this study is to: 1) Adopt the Greenseeker/nitrogen technology to Kentucky conditions using small plots and on-farm tests, and 2) Fine tune nitrogen recommendations under today's production practices and varieties for the most economical nitrogen rate on well-drained and marginally drained soils.

2010 Funding: \$5,000

Total Funding to Date: \$25,000

Farm Test of Crop Sensing for Site-Specific Nitrogen Fertilizer Application in Wheat

Primary Investigator: Ole Wendroth, University of Kentucky

This project is a continuation of other projects headed by Wendroth which began in 2005. The objectives of this study are to test whether site-specific



nitrogen application provides an advantage to the farmer compared to a spatially uniform nitrogen fertilizer application.

2010 Funding: \$6,500

Total Funding to Date: \$29,000

Managing Giant Ragweed and Marestalk in Wheat

Primary Investigator: James Martin, University of Kentucky



Photo courtesy of the University of Kentucky.

The objective of this research project is to evaluate the effect of seeding rate and preharvest herbicide applications for managing giant ragweed and marestalk in wheat. Martin will also investigate methods and chemistries that will allow for early control of these weeds.

2010 Funding: \$6,000

Total Funding to Date: \$12,000

Development of Chia, *Salvia hispanica* L., as a Sustainable Oil Crop

Primary Investigator: David Hildebrand, University of Kentucky

The University of Kentucky is evaluating chia as a new crop for Kentucky farmers due to its high levels of omega-3 fatty acids and soluble fiber. After four years of initial studies, Hildebrand has developed an early-flowering chia line for Kentucky and will evaluate the field performance for yield potential, agronomic performance, oil content and characteristics, and optimize

production practices (row spacing, fertilization, planting dates, etc.).

2010 Funding: \$5,000

Total Funding to Date: \$10,000

Investigation of Oat Production in Kentucky

Primary Investigator: Philip Logsdon, Miles Opti-Crop

The objective of this research is to investigate the potential for Kentucky farmers to successfully and economically raise winter oats. This research will investigate winter oat varieties available to Kentucky farmers and their agronomic fit in the state. Miles' work will explore timings relative to planting dates and various input applications. They will also look at the economic implications of oats compared to other small grains, as well as investigate new uses and markets for oats in Kentucky.

2010 Funding: \$4,000

Total Funding to Date: \$9,000

NEW PROJECTS

Improvement and Development of Barley for Use in Food, Feed, and Fuel

Primary Investigators: Carl A. Griffey and Wynse S. Brooks, Virginia Tech

The primary objective of this project is to develop high-yielding, disease resistant barley varieties having high quality designed for specific end uses, thereby, making winter barley a more cost competitive crop in the Eastern United States. The specific objectives of this project are: 1) to assess and improve yield potential and other desirable traits such as disease resistance of barley lines derived from crosses with hulled and hullless parents and; 2) to



develop barley varieties comparable to or better than current high yielding cultivars Thoroughbred and Price using both conventional and marker assisted breeding methods.

2010 Funding: \$5,000

Survey of the Tissue Nutrient Status of Winter Wheat in Kentucky

Primary Investigator: Greg Schwab, University of Kentucky

Tissue analysis will be used to determine if there are any undiagnosed nutrient deficiencies that may be yield limiting in wheat produced in Kentucky. Plant tissue analysis is useful to diagnose plant nutritional problems or to monitor effectiveness of a soil fertility program. It is especially valuable to assess the status of plant nutrients that do not have valid soil test calibration. In Kentucky, Mehlich 3 soil test has not been calibrated for wheat yield response to sulfur, boron, copper, manganese, or zinc.

2010 Funding: \$4,000

**Total Research Funding
for 2010/2011:**

\$135,337

Fall Wheat Planting Decisions

Greg Halich, UK Extension Farm Management Specialist, from UK Wheat Science News

Kentucky grain farmers are nearly finished harvesting corn and are getting to the point where they need to decide how much wheat they will plant this fall. In Kentucky, wheat is almost always planted in the fall following corn harvest and then double-cropped with soybeans in early summer after wheat harvest. This allows for two crops in one year. However, soybeans planted after the wheat harvest are more susceptible to summer drought, so on average, yields are lower for these double-cropped soybeans.

In Kentucky, this yield reduction typically averages around 20%. As a consequence, the majority of soybeans planted in KY are full-season plantings rather than double-cropped.

The big change this year is that we have had rapidly rising wheat prices during the last two months, courtesy of the drought in the Black Sea region. All else being equal, this will result in more of the acres designated for soybeans in 2011 being planted in wheat this fall, and consequently less full-season soybeans. So, what follows are some examples of these planting decisions and the likely implications.

In this analysis, I account for additional costs associated with the double-cropping including fuel, machinery repairs and depreciation, labor, hauling, etc. I'm using 2011 new crop Chicago Mercantile Exchange future's prices on September 21, 2010 and adjusting for new crop basis (estimated from a major grain elevator in western KY at \$.35/bu for corn, \$.30/bu for soybeans, and \$.70/bu for wheat). This results in new crop prices of \$4.40/bu for corn, \$10.40/bu for soybeans, and \$6.70/bu for wheat. Finally, I'm evaluating two locations with different agronomic characteristics: The first location is around Hopkinsville, which traditionally does a lot of double-cropping, and the second is the Daviess/Union County area that has some of the best yields for corn and soybeans, but traditionally plants less wheat. Cash rent is assumed to be \$175/acre for both these areas (note: this will vary substantially but is done for illustrative purposes only here). Net profit is estimated after subtracting out all variable and fixed costs represented by an efficient operation.

Major assumptions are:

\$2.75/gallon fuel, 15 mile one-way trucking, \$.40/unit N, \$.45/unit P, and \$.40/unit K.

Let's first compare double-cropping to planting full season soybeans. I'm going to assume around a 20% drop in soybean yield for double-cropped beans.

In the Hopkinsville Area I'm assuming:

- 70 bu wheat
- 35 bu double-cropped soybeans
- 44 bu full-season soybeans

\$230 net profit double-crop

\$79 net profit full-season soybeans

This results in a \$151 difference in favor of the wheat/soybean double crop. (Put another way, double-cropped soybean yield would have to drop to 20 bu before full-season beans were as profitable.)

In the Daviess/Union County Area I'm assuming:

- 65 bu wheat
- 38 bu double-cropped soybeans
- 50 bu full-season soybeans

\$228 net profit double-crop

\$140 net profit full-season soybeans

This results in a \$88 difference in favor of the wheat/soybean double crop. (Double-cropped soybean yield would have to drop to 29 bu in this case before full-season beans were as profitable.)

Another possibility from a decision standpoint is for ground that is coming out of corn but where the farmer was thinking of replanting corn. This is commonly referred to as continuous corn and is usually done on the best soils. This situation would be most applicable for the Daviess/Union County area.

In this situation I'm assuming:

- 167 bu continuous corn (5% yield loss from 175 bu rotational corn)
- 65 bu wheat
- 38 bu full-season soybeans

\$228 net profit double-crop

\$187 net profit continuous corn

This results in a \$41 difference in favor of the double crop vs. the continuous corn.

So, given the current market conditions, double-cropping looks extremely attractive for the 2010-11 crop year, especially in the Hopkinsville area. However, there are two wildcards right now: weather and seed availability. It is extremely dry in the western and central portions of the state, which is not conducive to good germination. Decent rains before late fall should prevent major problems. The more serious problem right now is the reported difficulty in obtaining seed. For those that can get seed, profitability of double cropped wheat-soybeans looks extremely good for 2011.

To change the assumptions above to your specific conditions and evaluate your expected profitability, please refer to Department of Agricultural Economics Budgets/Decision Aids website at: <http://www.ca.uky.edu/agecon/index.php?p=29>

Control of Volunteer Corn Important in Avoiding Insect Damage in Wheat

Doug Johnson, UK Extension Entomologist
UK Wheat Science News

As we approach wheat planting time, volunteer corn is once again a concern. Certainly there are many reasons for controlling this crop-gone-weed, including sucking up what little moisture there is in the soil. I will not deal with how to control the corn weeds, you must look to Dr. Martin for that (see www.kysmallgrains.org for story on control of volunteer corn). However, there are several good reasons from the pest point of view to get this weed out of your wheat fields.

Corn serves as an alternate host for several insects that may cause damage to wheat, particularly newly planted wheat. Chief among these are the grain aphid complex and fall armyworm. Volunteer corn and other grass weeds including Johnson grass and wheat used as a cover crop provides a “green bridge” for these insects to survive upon until wheat emerges. The worst case situation is the presence of these plants within the fields in which wheat will be sown. The weeds both attract the pests to the location and serve as a food host until the wheat emerges.

Grain Aphid Complex: After a summer of capturing few aphids, our suction traps have begun to pick up the presence of bird cherry-oat and rice root aphids. Though the numbers are not particularly large, certainly the populations have survived our hot dry summer. Both of these insects are important for their ability to move the viruses that cause the disease barley yellow dwarf in wheat. One of the most important protections against the impact of the disease is the prevention of early infection. Without question, removing the green bridge is important in obtaining this objective.

Fall armyworm (FAW): This insect has been a problem across west Kentucky for most of the late summer. X-tra large moth flights in late August resulted in caterpillar infestations across the area. Especially hard hit were alfalfa and grass forage crops. Fortunately, the corn was too far along to be affected. We know from experience that FAW will be found in our wheat fields. This is a migrant species that does not overwinter in KY but will remain active until at least the first killing frost.

Our most recent insect trap captures of FAW appear to indicate that another large generation may be seen. (Unfortunately our next data point will not be available until after this newsletter is finished.) The moth capture numbers are again climbing, following a pattern seen in 2007. The fall flight in 2007 resulted in

many infested fields. (See our trap capture graphs at: <http://www.uky.edu/Ag/IPMPrinceton/counts/fall/fawgraph.htm>). This does not necessarily mean a problem will occur, but it does mean that one needs to watch their fields.

In 2007 several consultants noted that FAW was present in their wheat fields, but the insect was feeding on the volunteer corn and not the wheat. Though this sounds odd, it may be easy to explain.

Host Crop Strain Identification: The insect species that we know as FAW is made up of at least two genetically based, host preference strains. One, the “corn strain” feeds primarily on corn and grain sorghum, while the second “rice strain” feeds on rice and small grasses, especially Bermuda grass.

In early September, we shipped moths captured from our traps to Dr. Rodney Nagoshi at the USDA Center for Medical, Agricultural and Veterinary Entomology in Gainesville, FL. Dr. Nagoshi analyzed 50 of these moths and found that 84% were of the “rice strain” while 16% were of the corn strain. We thank Dr. Nagoshi for his help. Of course, these populations are occurring much too late to be of importance to our corn or sorghum crops. However, it does beg the question of whether or not one or the other of these strains is more damaging to our wheat crop.

Some research seems to indicate that “corn strain” FAW do not feed on the small grasses. This would explain why in 2007 consultants found FAW in wheat fields, but feeding only on the volunteer corn. We currently do not have research to back this up, but it fits the current theory.

The question then becomes does the “rice strain” feed on wheat. This is still an open question because at the time the research was done wheat was not included in the host preference work. Anecdotally, we know that FAW has been reported feeding in wheat fields in the absence of volunteer corn. So, the question as to whether or not either of these strains (especially the rice strain) has a preference for wheat is still open at this time.

The answer to this question could be of great importance to us. For instance, if we have a large flight of FAW but it is all the corn strain is the wheat crop at any risk? What about if the flight is mostly rice strain?

To help answer this question, I would very much like to collect (or receive) insects from wheat fields this fall. It could be particularly informative if we could find FAW infestations in wheat fields that contain volunteer corn. If this is the case, the information that is needed to go with the worm sample would be: date of collection, location (county is ok) and which host plant the caterpillar was feeding upon.

If we can determine which of these strains is or is not feeding on our wheat, then that information may prove to have important predictive value. If you face this situation please contact me at doug.johnson@uky.edu and allow me to collect these insects for analysis.

Ky Small Grain Growers Assn
PO BOX 90
EASTWOOD KY 40018

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Agronomy Meetings

UK Early Bird Meetings
November 9 - Henderson
November 11 (a.m.) - Sedalia
November 11 (p.m.) - Hopkinsville

UK Winter Wheat Meeting
January 11, 2011
Christian County Extension Office

Visit www.kysmallgrains.org for more meeting information.

Kentucky Commodity Conference

Friday, January 21, 2011
Holiday Inn University Plaza Hotel
Bowling Green, KY

Registration & Trade Show begin at 10 a.m. CST

The Grower Appreciation Luncheon begins at noon. Our keynote speaker is Steve Kopperud, Executive Vice President of Policy Directions, Inc., a government and strategic communications consulting firm. He coordinates the Farm Animal Welfare Coalition and is past president of the Animal Agriculture Alliance, an organization dedicated to educating an increasingly urbanized American public about modern livestock production.

Annual Membership Meetings for the Ky Corn Growers, Ky Small Grain Growers and Ky Soybean Associations begin at 2 p.m.

The Marketing Session will feature Dr. Chris Hurt, of Purdue University. Dr. Hurt's areas of specialty include examination of family farm market problems, pricing strategies, and livestock futures market problems, pricing strategies, and livestock futures market performance. UK's agriculture economist Cory Walters will also speak.

The conference concludes with the Awards Banquet to honor Kentucky agricultural leaders and the 2010 Kentucky Production Contest winners.

Watch your mailbox for registration materials and make plans to attend.

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