

August 16, 2006

**Special points of interest:**

- **No-till Anxiety**
- **Benefits of winter canola**
- **Peanut Field Tours**
- **New Soybean web-page**

**Useful Links:**[www.soybean.okstate.edu](http://www.soybean.okstate.edu)[www.canola.okstate.edu](http://www.canola.okstate.edu)<http://alfalfa.okstate.edu>[www.wheat.okstate.edu](http://www.wheat.okstate.edu)<http://forage.okstate.edu>

# Cropping Systems Newsletter



## **Overcoming No-till Anxiety**

**Chad Godsey, *Cropping System Extension Specialist***

Many producers have probably considered switching to a no-till production system at one time or another but have felt anxiety about switching from their conventional tillage practices. It's natural for anyone who has farmed for any length of time to feel anxious about trying a new system. For a producer to establish and learn a new system seems daunting but it can be done with careful planning and surrounding yourself with knowledgeable people. The following is a few benefits of no-till and some suggestions if you are considering a switch to no-till.

The biggest attribute of no-till is long-term productivity of your soil. When a soil is tilled it loses a key ingredient, carbon. Soil carbon makes up over half of the soil organic matter. Soil organic matter is a critical determinant in water holding capacity and overall soil productivity. Soil organic matter has continued to decrease over the past several decades due to intensive tillage. In the western part of Oklahoma organic matter levels in soils prior to tillage were probably in the 2 to 3% range while today it would be hard to find a conventional tilled soil with organic matter percentage >2.

Research has indicated no-till increases organic matter in the surface three inches of soil and will tend to conserve more moisture compared to conventional till systems. Moisture savings is the second most important benefit of no-till. It has been estimated in conventional till systems with little or no surface residue that precipitation storage efficiency is 20%, so if you receive 10 inches of rain during your fallow period you only conserve 2 inches of the 10 that you received. Precipitation storage efficiency estimates in no-till have been 40%. You can conserve two times as much moisture in a no-till system compared with a conventional till system. I feel that this is a conservative estimate especially in western Oklahoma where we see very high evaporation rates. There are numerous other benefits to no-till such as reduced wind and water erosion, time savings, fuel savings, decreased soil compaction, reduced labor requirements.

Use your apprehension to your benefit. This provides a good means of seeking answers to your questions. Recently I was at a conservation tillage meeting in Texas and a longtime no-till producer gave a presentation and he recommended four things: 1) get a mentor, 2) stay out of the coffee shop, 3) be prepared for criticism, and 4) get a hobby.

I think finding a producer in your surrounding area that has experience with no-till is important. They have experience and have worked through some of the same problems that you will probably encounter. Extension agents, Natural Resource Conservation Service district conservationist are also a source of potential information, so there are several sources available to answer your questions. Keep asking till you find a suitable answer. When making a transition to a no-till system you often hear about a slight yield reductions the first three to five years. I would argue that this is management related and can be overcome with making adjustments to equipment, herbicide/pesticide programs, and etc. Also make sure your soil fertility is adequate and you have no compaction problems. This is a perfect example of learning from somebody that has already faced the challenge of converting.

When switching to a no-till system you need to be prepared to be criticized. You will probably here stuff like "What in the world is he doing?" and the list could go on and on. I would echo the sentiments of many no-till producers and that would be to stay out of the coffee shop. In some parts of the world and even in the US no-till production systems are the norm not the exception. Oklahoma is behind in the adoption of no-till compared to surrounding states.

Time savings is often mentioned when talking with no-till producers. It has been estimated that on a 500 acre farm, the time savings can be as great as 225 hours or almost four 60-hour work weeks in a given year, so it may be important to find a hobby to take up your extra time.

When considering switching to no-till I recommend that you have a well thought out plan that has considered all aspects. You need to consider soil testing, crop rotation, soil compaction, and how no-till will effect other farm enterprises (cattle). Like many of my colleagues say do not adopt no-till for the sake of trying to save money on fuel. You must be dedicated and want no-till to work for you. If you go into no-till with an "I think it is going to fail attitude" it probably will and you will be back to square one. Always remember that no one production systems will work the same for everybody.



Double crop grain sorghum planted following winter canola in Garfield County.

## Will winter canola fit into my cropping system?

**Does winter canola deserve a look this fall?** After a difficult 2005/2006 growing season producers seem to be considering changes to their cropping systems. Even though the temperatures and drought caused poor yields in the majority of the state a lot was learned from a research standpoint. Observations were made that winter canola was fairly drought tolerant. Many winter canola producers seemed to think their canola performed as well as their wheat under the dismal conditions. This was however, dependant on which producer you asked. In my opinion the performance of both crops was similar under the same growing conditions.

When deciding what to plant this fall you may want to consider these the following facts before you make your decision.

- 1. Profitable seed yields can be achieved.** Research in Oklahoma has clearly indicated that winter canola can be produced profitably in many areas of Oklahoma. Variety trials throughout the state have indicated average seed yields in excess of 1500 lbs/acre. For economic determinations of breakeven yields refer to <http://www.canola.okstate.edu/cropproduction/economics/index.htm>.
- 2. A decrease in weed pressure.** Research trials in the state have indicated a significant reduction in weed pressure in following winter wheat crops.
- 3. Crop rotation increases yields.** Increasing yields can be achieved by alternating crops on the same land. Crops grown continuous can cause increased weed, pest, and disease. At the summer canola production meetings it was not uncommon to hear producers from Kansas and Oklahoma say that introducing winter canola into their rotation increased subsequent wheat yields by 10-20 bu/ac. This is often referred to as the "rotation effect". The

increase in yields when switching from a monoculture to a more diversified crop rotation is well documented but poorly understood. It is probably a combination of several things that may include a reduction in weed, pest, disease, and an increase in plant nutrient availability.

**4. Increase in risk diversification.** Producers that plant winter wheat only would be considered to have minimal diversification. This is like "putting all their eggs in one basket." Introduction of broadleaf and summer grass and broadleaf crops greatly increases their diversification. Some type of crop rotation is strongly recommended.

**Crop insurance now available.** Federal crop insurance is now available for winter canola. You must sign up for insurance by August 31. The availability of federal crop insurance will make planting winter canola less of a risk. For more information on crop insurance visit <http://www.canola.okstate.edu/cropproduction/cropinsurance/index.htm>.

Now you have to ask yourself if winter canola has the potential to fit into your cropping system. Sustainability of your cropping system depends upon you making changes to increase the productivity of your soil. Crop rotation is one way to improve soil productivity.

*"It has been estimated in conventional till systems with little or no surface residue that precipitation storage efficiency is 20%, so if you receive 10 inches of rain during your fallow period you only conserve 2 inches of the 10 that you received. Precipitation storage efficiency estimates in no-till have been 40%."*

## Fall 2006 Peanut Field Tours

**"A look back at 2006"**

### Locations:

September 14, 2006 – Ringwood Community Center, Ringwood, OK

September 26, 2006 – Erick High Scholl Cafeteria, Erick, OK

September 28, 2006 – Caddo Research Station, Fort Cobb, OK

**Tours begin at 5:30pm for all locations**

"Hull blasting" will be available at all locations. Farmers should bring a representative sample of pods from their field to blast, enabling them to determine maturity and anticipated digging dates.

### *Ringwood Location:*

This provides a general look at peanut production in Oklahoma as well as an opportunity to view peanut variety test plots. Information will be presented on pests, disease, economics, and general peanut production practices.

### *Erick Location:*

Attendees will have an opportunity to view variety test plots and fungicide test plots. We will also discuss what worked in 2006 and what did not.

### *Fort Cobb Location:*

Attendees will have an opportunity to view variety test plots, long-term tillage study, peanut disease studies, and peanut rotation studies.

**A meal will be provided at each location free of charge.**

### *List of Sponsors:*

BASF, Bayer Crop Science, BeckerUnderwood, Estes Inc., Helena, Knutson Irrigation Design, Nitragin Inc., Syngenta Crop Protection



## New Soybean Webpage

A recently re-designed soybean webpage was released. Updated information on production technologies, variety test results, disease and weed management can be found at the following location <http://www.soybean.okstate.edu/>



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## Upcoming Events/Meetings

### Three Peanut Field Tours Scheduled for September:

- September 14—Ringwood Community Center, Ringwood, OK
- September 26—Erick High School Cafeteria, Erick, OK
- September 28—Caddo Research Station, Fort Cobb, OK

**For more information contact Chad Godsey or your local extension agent.**

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