



# Ag Insights

*From the Desks of Your Northwest Area Ag Specialists*

Oklahoma Cooperative Extension Service - Division of Agricultural Sciences and Natural Resources - Oklahoma State University

**May, 2019**

## **Wheat Updates**

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The wheat crop is progressing at fare pace. Compared to the past couple of years it seems like the wheat crop might have been a little late this year as it began to go reproductive. Fortunately, most of the region has received very timely rainfalls to set good grain and for some too much to get timely field operations handled. The region has experienced great grain filling weather so far. I predict that yields are going to be very generous this harvest.

Pest management is critical to protect yield potential. Applying an herbicide, insecticide, or fungicide becomes a more challenging decision when grain markets are low. In addition to preventing yield losses, weed management carries more impact of the producer's bottom line since weeds can increase price reductions at the elevator. If weeds are not kept in check every year, then issues can proliferate next year and quickly get out of control. Economics of weed control needs to be managed as a long-term commitment.

As far as disease pressure, we started the spring with only very sparse reports throughout the region. Powdery mildew, tan spot, and septoria have been becoming more noticeable as the spring progressed but typically was not too prevalent and stayed low in the canopy. Later in the spring we have received reports of stripe rust on susceptible varieties. As we moved into May stripe rust has started to proliferate up to the flagleaf in some cases. This week we have started to find leaf rust north of I-40 up to Kingfisher and Homestead. With leaf rust now being found and current favorable environmental conditions for it, it may become more severe in the next few weeks.

Since overall foliar wheat diseases were limited as the crop began to emerge a flagleaf, a decent portion of wheat growers opted not to apply a fungicide this spring. The wheat producers that have applied a fungicide probably made a wise decision, but it is still too early to tell. There may still be some time left for late sown wheat that has just started to head out. Many fungicides are labeled up to flowering (Feekes growth stage 10.5) and some products are labeled into grain development when the kernels are at watery ripe (Feekes 10.5.4). In addition to the growth stage of the wheat, also review the fungicide product label to note any pre harvest intervals (PHI). PHI can range from 7 days to 45 days needed between application and grain harvest.

Heavy rainfalls last fall leached out significant nitrogen amounts from the root zone on many wheat fields. This had a negative impact on wheat pasture, but is now obvious on some fields going to grain. This was a great year for split applications of nitrogen topdress, with one application in the winter and the other this spring. The weather has created a great potential for grain yields, but if nitrogen is limited at all the high yielding fields will have a potential to have reduced

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protein content.

The annual wheat crop tour conducted on behalf of the Oklahoma Grain and Feed Association predicted about 75% to 80% of this year's wheat crop is going to be harvested for grain. These reports were conducted late April, so it is hard to estimate how many acres will end up being grazed out, put up for hay, or to grain. Haying operations have been delayed due to muddy conditions. To optimize hay quality it is best to lay it down in the boot stage. Delayed haying will increase tonnage per acre, but quality will rapidly decrease.

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## Summary of 2018 Horn Fly Control Demonstration

Dana Zook, Area Livestock Specialist, Enid, OK

It's that time of year again. Temperatures are warming up and cattle producers are preparing for spring turn-out into summer pastures. Branding, vaccination, and castration are common activities for this time of year; does fly control make the cut on this year's to-do list?

Of all external parasites, horn flies have the most significant impact on the productivity of beef herds. Stress from biting is the primary cause of reduced productivity. Some may question if stress warrants control, but at a threshold level above 200-300 flies per animal these insects quietly erode profitability by diminishing milk production in beef cows leading to reduced weight gain in their calves. Are you still wondering if it will pay to control the flies? A 2017 collaborative research study between Kansas State and Oklahoma State determined stocker cattle with an insecticidal ear tag gained 0.21 more pounds per day compared to their counterparts with no horn fly control. This weight gain resulted in a \$12 net profit over the cost of the ear tag during a 90 day summer grazing period.

A common fly control question among producers relates to the best timing for insecticidal control. Breeding conditions for horn flies are ideal in hot dry conditions when the temperatures rise above 90 degrees. Recently, slight changes in Oklahoma's environmental conditions have caused the local horn fly season to lengthen. In fact, a view of temperatures in the past few years will show periods in April and May as well as our late fall months of October and November that have had warm days around 90 degrees. For this reason, producers may need to adjust the timing of horn fly control in their beef herds. In the past, producers have been encouraged to delay control to early summer and so a demonstration was conducted to determine if that recommendation still stands given the extended horn fly season.

In the summer of 2018, the demonstration was conducted in Alfalfa County to evaluate the application timing of fly tags on season long control. To measure the efficacy of the tag, side profile pictures were taken of cows on a monthly basis prior to each tag treatment starting April 13<sup>th</sup> and in subsequent months through September. Pictures were then uploaded to a computer and flies were counted manually and recorded by treatment. Three groups of cows were tagged with a Tri-Zap (Y-tex) fly tags in April, May, or June. An untreated control group was also utilized to document the natural fly pressure.

In April tagged cows, flies were controlled well below the threshold level even after the expected 90 days of control. Warm temperatures caused fly populations to proliferate in late spring leading to fly counts above threshold levels before fly tags were applied to the May and June tagged groups. Luckily, when fly tags were applied in May and June tagged groups, flies were controlled under the threshold level for 90 days. However, due to high populations of flies in late spring, cumulative analysis showed that delaying tags until June contributed to an overall higher season long population compared to tagging in April or May. This was a surprising result as our previous belief when using fly tags is to delay tagging as long as possible to allow for control during the hottest time of the summer (August and September) when horn fly populations tend to be the greatest. This demonstration gave us a snapshot of tag timing but more work needs to be done to rule out the environmental factors of cooler than normal temperatures in June and July of 2018.

In general, if a properly rotated tag is utilized then timing of the application is less important to the overall performance of the tag. Poor horn fly control can occur when tags are not been rotated properly or when tags are utilized that have been on the market for a longer period of time. Producers who opt to use sprays or pour-ons should also pay close attention to chemicals to get the best control and avoid resistance. If you have any questions regarding fly control for the coming summer season, contact your local county extension educator for details.

# Land Lease Agreements-What is Fair and What is Equitable?

Trent T. Milacek, NW Area Ag Econ Specialist

For many farmers the land resource is too expensive to purchase. Therefore, many opt for leasing land in order to conduct their business. The negotiation of lease terms is perhaps the most crucial decision they will make, because of the effect those terms will have on their business.

The first item most parties will negotiate is price. This has the most influence on a farmer's profitability and determines the landowner's return on investment for the land. OSU publishes a cropland rental rate survey that can be found at the following web address: <http://factsheets.okstate.edu/documents/cr-230-oklahoma-cropland-rental-rates-2018-19/>. From this factsheet, interested parties can determine that the average dryland wheat cash rent in Oklahoma is \$32.90/acre. Looking at a broader dataset, the 10-year average cash rent for the state of Oklahoma

An equitable rental rate must take into account varying conditions of the land. One obvious consideration that could increase or decrease the rental rate is the land's productivity. Other amenities like fencing, water access, road access and the landowner's willingness to maintain infrastructure could affect the price up or down.

Cash rental agreements can be desirable for landowner's who do not want to be exposed to production and market risk. They receive a fixed income that might be similar to a long term average of a comparable share-crop agreement, without the highs and lows associated with production ag. In return, the tenant has more flexibility in production systems and crop selection that may not be possible with traditional wheat share-crop agreements.

What is a traditional share-crop agreement? A long-standing agreement for dryland wheat would be identified as "1/3 –2/3." The landowner receives 1/3 of the production and the tenant receives 2/3. The landowner is also expected to pay for 1/3 of the expenses directly related to the production of the crop. While those inputs can vary, they might include fertilizer and herbicides applied in-season. In high-input crops like soybeans, this arrangement begins to breakdown and becomes unprofitable to the farmer.

Share-crop agreements are desirable for a landowner who wants to remain engaged in production agriculture and who want to benefit from good years while sharing a loss in bad years.

It is generally believed that the cost to the farmer in the share-crop arrangement is 1/3 of the crop, however, that is not true. That revenue was never the farmer's to receive. The real cost of a share-crop agreement to the farmer is the cost to produce the landowner's share of the crop.

For example, assume it costs \$160/acre to produce wheat. For 100 acres, this is \$16,000. The landowner paid 1/3 of the fertilizer and herbicides totaling \$1,998. The producer is responsible for the remainder of the expense totaling \$14,002.

To illustrate, break down the 100 acre farm into two fields. The first field is 66.7 acres where the cost of production is paid by the farmer and all of the revenue is retained by the farmer. The cost to produce the first field is \$10,672 paid by the farmer. The second field is 33.3 acres and the production expenses are shared with all of the revenue retained by the landowner. The second field's cost of production is \$5,328. The landowner's share of the expenses is \$1,998 from the previous paragraph, leaving the farmer to pay the remaining \$3,330 of expenses with no return. Therefore, the farmer's equivalent cash rent on the entire 100 acre farm is \$33.30/acre.

From this example, what is the revenue received by the landowner? By entering into a share-crop agreement, the landowner is agreeing to pay \$1,998 in the hope that the investment will increase in value. An average wheat crop is close to 30 bu./acre and cash prices in Oklahoma are near \$4.00/bu. In this example, the landowner will receive 10 bu./acre and can sell that wheat for \$4.00/bu. generating \$40/acre in gross revenue. They have invested \$20/acre in the crop, so their net revenue is \$20/acre.

At current wheat prices and average wheat yields, landowners in a share-crop agreement receive approximately \$12.90/acre less than the average cash rental rate.

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The idea that share-crop agreements help shield a farmer from risk is only slightly true. The farmer is no longer responsible for one third of the fertilizer and herbicide cost, but still must shoulder the expense of preparing the ground and the capital expenses of owning machinery. Coupling that with the fact that traditional share-crop arrangements do not easily allow crop rotation, they can be very restrictive to good farming practices. A reasonable fixed cash rent may actually be less risky for a farmer, because they can double-crop behind a failed crop or easily switch from harvesting grain to grazing out wheat without seeking the permission of the landowner in a share-crop arrangement.

These examples are provided for reference only and the outcomes are influenced greatly by the cost of the production system. If you would like assistance comparing sharecrop and cash lease arrangements for your farm, please contact your local county extension agent.

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## Optimizing Your Breeding Season

**Britt Hicks, Ph.D., Area Extension Livestock Specialist**

The spring breeding season is drawing near and producers need to properly manage both their cows and bulls considering ways to optimize beef production. Herd reproduction and fertility are important for profitability to occur. Research has shown that the economic value of reproduction is **5 times greater** than growth or maternal output traits in beef cattle (Mulliniks et al., 2019). Hence, getting cows bred in a timely manner is critical. Open cows negatively impact profitability, so producers need to use breeding programs that increase the percentage of their cows that get bred. A successful breeding season hinges on nutrition, vaccination, sire selection, breeding soundness exams, and management protocols to control the length of the breeding season.

The first step in preparing the herd for the breeding season is to assess the nutritional status of both cows and bulls. Body condition scoring (BCS) is a practical management tool to allow beef producers to distinguish differences in nutritional needs of animals in the herd. A cow should calve at a BCS of 5 to 6 and be bred at a BCS of 5 to 6. If a cow calves at a BCS less than 5 it will take her longer to return to estrus and thus, take longer to get her rebred.

A BCS of 5 to 6 for bulls is also recommended before the breeding season starts since bulls being too fat or too thin can impact fertility. If changes need to be made to the diet to achieve this BCS they should occur gradually. Ration changes prior to the breeding season can have effects on reproductive performance because mature sperm is produced over a 60-day period before ejaculation.

It is recommended that breeding soundness exams be conducted on all bulls a few weeks before the breeding season even if they were recently purchased as "satisfactory breeders" as a good insurance policy. In addition to breeding soundness exams, pre-breeding vaccinations is an important practice. A visit with your veterinarian about appropriate vaccinations, deworming, and other health considerations is recommended.

Another important issue to address is how many bulls to put in each pasture. A rule of thumb is one cow per month of age of the bull up to 3 years old. Therefore the true "yearling" would only be exposed to 12 or 13 females. If he is a year and a half old (18 months), then he should be able to breed 15 – 18 cows. By the time the bull is two years of age, he should be able to breed 24 or 25 cows. However, research indicates this number could be increased to as many as 50 cows per bull without a negative impact on conception rate. In determining the proper bull power, several factors should be considered including the topography and size of the pasture, feed condition, age and condition of the bulls.

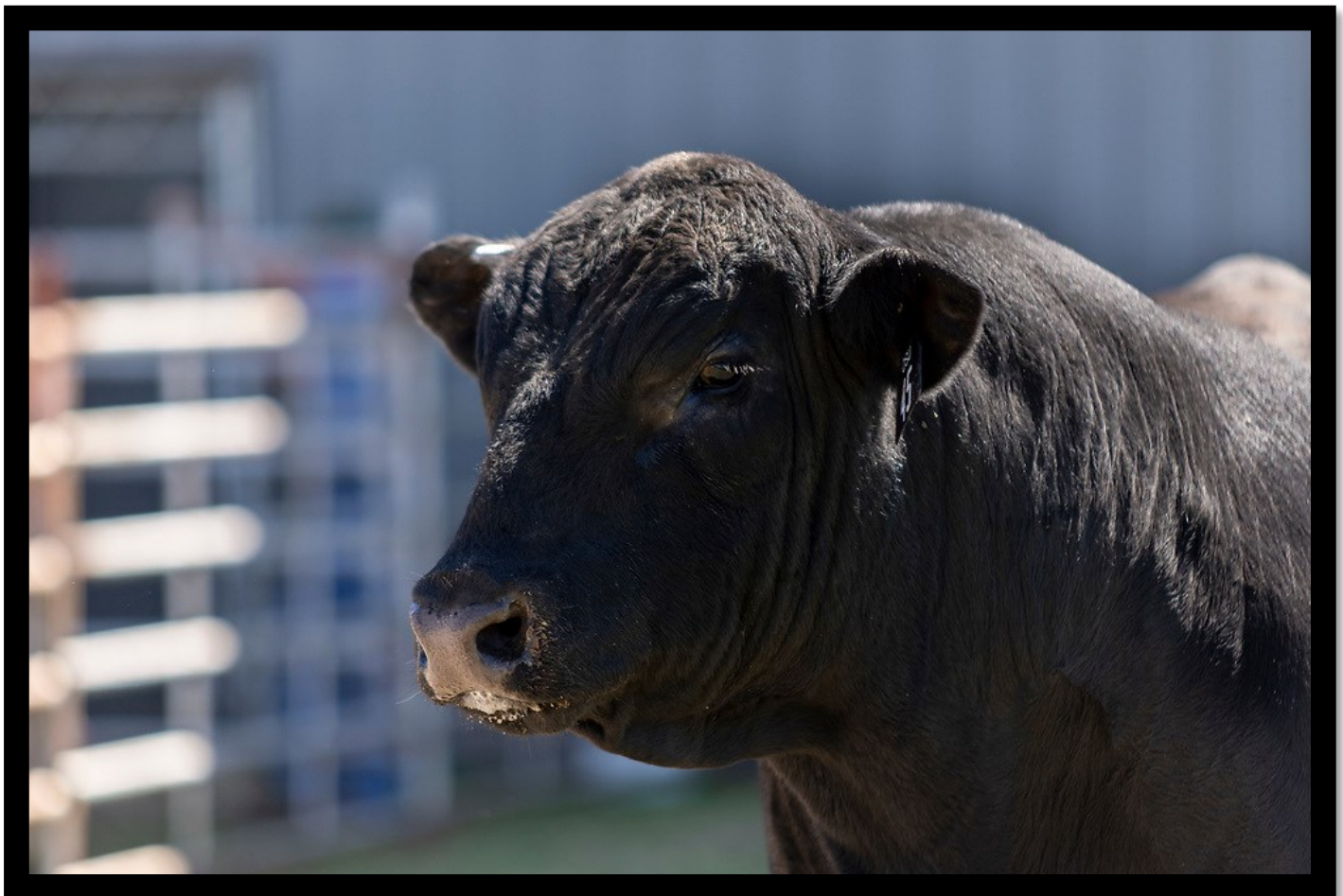
Producers need to continually observe and manage both bulls and cows during the breeding season. Overlooking critical warn-

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ing signs could result in reduced pregnancy rates. Assess the BCS of the bulls. It is not unusual for a bull to lose 10 to 15% of their body weight during the breeding season. If the bull becomes too thin the producer should consider replacing him because his ability to breed cows will be reduced. Observe bulls to ensure they are actively checking cows and breeding normally. Watch for injuries. Multiple cows coming back into heat after being bred or a high number of cows showing heat late in the breeding season are also important warning signs.

In conclusion, a successful breeding season is dependent on a number of important management factors. Keep in mind that bulls have more influence on the success of the breeding season and the herd's future genetics because a cow produces one calf a year, while a bull can potentially sire 25 to 50 calves annually. Breeding success is vitally important to the profitability of the beef operation. Through good management practices breeding efficiency can be obtained. It is important to remember that both the cow and the bull are vital parts to the breeding equation.



# OKLAHOMA STATE RANCH TOUR

## NORTHWEST OKLAHOMA

★ JUNE 5-6, 2019 ★



### For More Information:

**Greg Highfill**  
Woods County Ext.  
580-327-2786  
greg.highfill@okstate.edu

**Dana Bay**  
Woodward County Ext.  
580-254-3391  
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**Dana Zook**  
NW Area Ext.  
580-237-7677  
dana.zook@okstate.edu

**Registration \$40**

*Registration Deadline:*

**May 29, 2019**

*Catered meal and snacks and drinks provided*

*Please see back page for  
registration and hotel information*



**June 5: 11:00am**

***McMurphy Red Angus - Alva, OK***

Purebred Angus & Red Angus operation  
Keep/cull heifer class  
Bull development  
Marketing

***\*\*Lunch hosted at the McMurphy Ranch\*\****

***Jesse Chapman Ranch- Alva, OK***

Successful stocker operation  
Innovative use of cover crops for forages  
Stocker cattle panel discussion

***Cargill Salt Plant Tour- Freedom, OK***

Production of salt from deep well brine  
Production of salt blocks & other salt products

***Wildfire Recovery & Use of Prescribed Burning***

North of Camp Houston  
Forage recovery from Anderson Creek Fire  
Use of prescribed burn to:  
manage trees & enhance forage quality

***Luddington Angus Ranch-Freedom, OK***

Purebred Angus operation  
500 cow working ranch  
Sire selection & bull development  
AI & ET  
Marketing

***\*\*Evening meal hosted at Luddington Ranch\*\****

**June 6: 7:30am - 12:30pm**

***Cattlemen's Choice Feedyard-Gage, OK***

10,000 head feedyard specializing in:  
Natural, NHTC & GAP programs  
Current home of OK Steer Feedout

***Davison & Sons Cattle Co. - Arnett, OK***

Progressive commercial cow-calf operation  
Rotational crossbreeding systems  
Prescribed burning

***\*\*Lunch on your own\*\****

# OKLAHOMA STATE RANCH TOUR

## NORTHWEST OKLAHOMA

★June 5-6, 2019★

### Wednesday, June 5

Those who wish to ride in the vans should meet at the Camp Houston Country Store at the intersection of US Hwy 64 and OK-50. For those riding in the van, vehicles can be left here. We will return to the vehicles following supper at Luddington's. Those who wish to drive their own vehicle can meet the group at McMurphy's Red Angus Operation. The program will start promptly at 11:30 at McMurphy's.

### Thursday, June 6

Instructions for Thursday morning meeting place will be given at supper on Wednesday.

**Attendees must make their own hotel accommodations**

Comfort Inn & Suites  
2930 Williams Ave.  
Woodward, OK  
580-256-1417

\$98 + tax  
Must book by May 15th  
Ask for block listed under Dana Zook

Holiday Inn Express  
3333 Williams Ave.  
Woodward, OK  
580-256-5200

\$89 + tax  
Must book by June 4th  
Ask for block listed under Master Cattleman



*Davison & Sons*



*Cattlemen's Choice Feedyard*



*Luddington Angus Ranch*



*Cargill Salt Plant*



*McMurphy Red Angus*



*Jesse Chapman Ranch*

## Ranch Tour Registration

Registration Options:

Register online at: <http://www.afs.okstate.edu/marketplace>

**Registration \$40**

Pay by check with this form. Please make checks payable to: **OSU Animal Science**

Please mail completed form and payment to: 201 Animal Science Bld, Stillwater, OK 74078

Total: \$ \_\_\_\_\_

Name: \_\_\_\_\_

Check # \_\_\_\_\_

Address: \_\_\_\_\_

Please check the box if you will be riding in a van

Phone Number: \_\_\_\_\_

### For More Information:

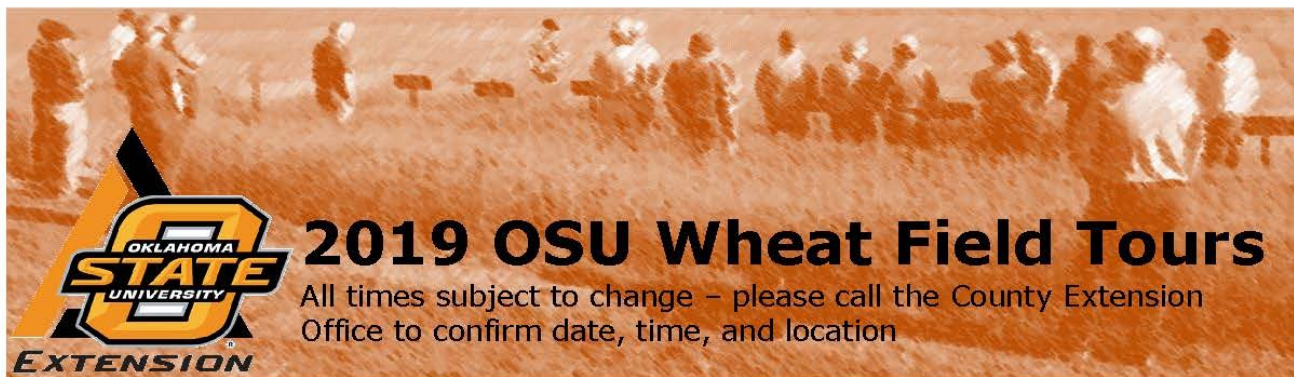
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**Registration Deadline is  
May 29, 2019**



## 2019 OSU Wheat Field Tours

All times subject to change – please call the County Extension Office to confirm date, time, and location

Date	Location	Time	Office Number	Notes
04/23/19	Walters	10:00 AM	580-875-3136	Replicated plot
04/25/19	Sentinel	11:00 AM	580-832-3356	Demo plot, end with lunch
04/26/19	Chickasha	9:00 AM	405-224-2216	Field Day, Tours start at 9:30
05/01/19	Apache	5:00 PM	405-247-3376	Replicated plot, meal after plot tour
05/01/19	Cheyenne	9:00 AM	580-497-3339	Demo plot
05/01/19	Butler	1:00 PM	580-323-2291	Demo plot
05/01/19	Weatherford	4:00 PM	580-323-2291	Demo plot
05/02/19	Gotebo	9:30 AM	580-726-5643	Demo plot
05/03/19	Afton	10:00 AM	918-542-1688	Replicated plot
05/06/19	Kildare	8:00 AM	580-362-3194	Replicated plot, Breakfast then plot tour
05/06/19	Cherokee	6:00 PM	580-596-3131	Replicated plot
05/07/19	Kingfisher	7:30 AM	405-375-3822	Replicated plot, Breakfast then plot tour
05/07/19	Altus – east	9:00 Am	580-482-0823	Demo plot
05/07/19	Altus	10:30 AM	580-482-0823	Replicated plot, end with lunch
05/07/19	Thomas	12:00 PM	580-323-2291	Replicated plot, Lunch then plot tour
05/07/19	Altus – west	1:30 PM	580-482-0823	Demo plot
05/07/19	Homestead	6:00 PM	580-227-3786	Replicated plot, meal then plot tour
05/08/19	Minco	10:30 AM	405-224-2216	Demo plot, end with lunch
05/08/19	Taloga	12:00 PM	580-328-5351	Demo plot, Lunch then plot tour
05/09/19	Waurika	10:00 AM	580-228-2332	Phosphorus Demo plot
05/10/19	Lahoma	8:30 AM	580-237-1228	Field Day, Tours start at 9, end with lunch
05/11/19	Alva	7:30 AM	580-327-2786	Review Varieties @ 8, Field tour @ 9:30
05/13/19	Morris	9:30 AM	918-756-1958	Repl. & Demo plot tour, ends with lunch
05/14/19	El Reno	8:00 AM	405-262-0155	Replicated plot
05/14/19	Greenfield	12:00 PM	580-623-5195	Demo plot, Lunch then plot tour
05/16/19	Lamont	9:00 AM	580-395-2134	Replicated plot
05/16/19	Caldwell, KS	12:00 PM	580-395-2134	Demo plot tour and lunch at noon
05/17/19	Braman	8:00 AM	580-362-3194	Demo plot and Nitrogen Trial
05/21/19	Buffalo	10:00 AM	580-735-2252	Replicated plot
05/28/19	Hooker	9:30 AM	580-338-7300	Replicated plot
05/28/19	Balko	1:00 PM	580-625-3464	Replicated plot
05/28/19	Goodwell	4:00 PM	580-338-7300	Replicated plot

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