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1. Planting wheat into dry soils

Soils are generally very dry in much of Kansas. Wheat producers faced with very dry soils basically have three main options:

\* Dust it in at the normal seeding depth and normal planting date -- and hope for rain. This is probably the best option. The seed will remain viable in the soil until it gets enough moisture. Before planting, producers should look at the long-term forecast and try to estimate how long the dry conditions will persist. If it looks like there's a good chance the dry weather will continue until at least the back end of the optimum range of planting dates, producers should treat the fields as if they were planting later than the optimum time. Rather than cutting back on seeding rates and fertilizer to save money on a lost cause, producers should increase seeding rates, consider using a fungicide seed treatment, and consider using a starter fertilizer. The idea is to make sure the wheat gets off to a good start and will have enough heads to have good yield potential, assuming it will eventually rain and the crop will emerge late. Wheat that emerges in November almost always has fewer fall tillers than wheat that emerges in September or October.

There are some risks to this option. For one thing, a hard rain could crust over the soil or wash soil off planting ridges and into the seed furrows, potentially causing emergence problems. Another factor is the potential for wind erosion if the field lies unprotected with no ridges. Also, the wheat may not come up until spring, in which case it may have been better not to plant the wheat at all and plant a spring crop instead. Probably the worst-case scenario for this option would be if a light rain occurs and the seed gets just enough moisture to germinate the seed but not enough for the seedlings to emerge through the soil or to survive very long if dry conditions return. This could result in a loss of the stand.

\* Use a hoe drill to plant deeper-than-normal into moisture now, if possible. This option can work if the variety to be planted has a long coleoptile, the producer is using a hoe drill, and there is good

moisture within reach. The advantage of this option is that the crop should come up and make a stand during the optimum time in the fall. This would keep the soil from blowing. Also, the ridges created by hoe drills also help keep the soil from blowing.

The main risk of this option is poor emergence. Deep-planted wheat normally has below-normal emergence, so a higher seeding rate should be used. Any rain that occurs before the seedlings have emerged could add additional soil into the seed furrow, making it even harder for the coleoptile to reach the soil surface. Any time you increase the seeding depth, the seedling will have to stay within the soil just that much longer before emerging through the soil surface. Delayed emergence leads to more potential for disease and pest problems, and reduced tillering potential late in the season. It's even possible that the wheat would get planted so deep that it would germinate but never emerge at all, especially if the coleoptile length is too short for the depth of planting. Generally speaking, it's best to plant no deeper than 3 inches with most varieties.

\* Wait for a rain, and then plant. To overcome the risk of crusting or stand failure, producers may decide to wait until it has rained and soil moisture conditions are adequate before planting. Under the right conditions, this would result in good stands, assuming the producer uses a high seeding rate and a starter fertilizer, if appropriate. If it remains dry well past the optimum range of planting dates, the producer would then have the option of just keeping the wheat seed in the shed until next fall and planting spring crop next year instead.

The risk of this option is that the weather may turn rainy and stay wet later this fall, preventing the producer from planting the wheat at all while those who "dusted" their wheat in have a good stand. There is also the risk of leaving the soil unprotected from the wind through the winter until the spring crop is planted.

Crop insurance considerations and deadlines will play a role in these decisions.

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## 2. Start planning now for winter canola planting

The 2011-2012 growing season was an excellent one for winter canola across Kansas due to the very mild winter temperatures and timely precipitation. The National Winter Canola Variety Trial yield averages for Belleville, Garden City, Kiowa, and Manhattan were 80, 46, 42, and 44 bushels per acre, respectively. Variety trial yields were lower at Andale and Marquette because of hail and wind damage to the crop before harvest. The high yields at Belleville may be attributed to optimal fall stands, no winterkill, and cooler nighttime temperatures at grain fill. The plot was not irrigated. Of the six locations, only Garden City was irrigated.

Winter canola cultivars exist today that make production possible across much of Kansas. When a winter hardy cultivar is planted at the optimum time, canola consistently survives the extremes of Kansas winters. With a current cash price around \$13 per bushel, canola is showing profitable returns in Kansas.

Just as one season ends, however, another one begins. The winter canola planting window arrives for much of Kansas by late August or the first week of September. Now is the time to make decisions to

ensure a successful start to the 2012-2013 growing season. Here are some key points to consider as you decide whether winter canola can be a profitable crop for your farm.

### **Where will winter canola grow in Kansas?**

- The most common production areas are central and south central Kansas under dryland conditions, and southwest Kansas under irrigated conditions. Canola is showing much-improved consistency along the I-70 corridor.

### **Is insurance available and what are the plant-by dates?**

- Insurance through written agreements is available in counties adjacent to and south of I-70. Producers must apply for a written agreement with their insurance agent by **August 31**. To qualify for full benefits of the coverage, including replant payment if necessary, the earliest planting date is September 1 and the final planting date is September 30. We are working with the Risk Management Agency to move the earliest planting date into August for far western Kansas, and to expand written agreement coverage north of I-70.

### **Variety/Hybrid Selection**

- Selecting a variety or hybrid should be based on winter hardiness, seed yield, oil content, disease resistance, relative maturity, and lodging and shatter tolerances.
- Roundup Ready varieties and hybrids are available, as are varieties with tolerance to carryover of sulfonylurea (SU) herbicides applied to a previous crop (e.g. Finesse, Glean).
- Consider selecting two or more varieties or hybrids with differing relative maturities to spread out harvest and reduce risk.

### **Site Selection**

- Although canola grows over a wide range of soil textures, well-drained, medium-textured soils are best. Soils where water stands for several days or those prone to water logging are poor choices.
- The soil pH should be between 5.5 and 7.0.
- Be mindful when planting canola following crops like sunflower, soybean, alfalfa, or cotton. These crops share several diseases with canola. Planting canola continuously is not recommended and it is uninsurable. Plant canola after grass crops such as wheat, oats, and corn because these crops do not share diseases with canola.
- Canola will perform best when adequate time is allowed after the preceding crop to allow for soil moisture recharge and weed control, and where there is adequate time to get the canola planted early enough to help the plants survive over winter.
- Fields with heavy winter broadleaf weed pressure should be avoided if possible. If planting where heavy broadleaf weed pressure exists, consider planting a Roundup Ready cultivar.
- Make sure you are aware of the herbicide history of potential sites. Winter canola cultivars are sensitive to SU and triazine herbicide carryover, and these products have long plant-back restrictions (often 18 months or greater). Commercial varieties that possess tolerance to SU herbicide carryover can be planted the fall following a spring SU application.

### **Seedbed Preparation**

- Weeds must be controlled chemically, mechanically, or with a combination of both methods prior to planting because canola seedlings are not competitive with weeds.
- Open-pollinated canola varieties range from 100,000 to 125,000 seeds per pound, so a properly prepared seedbed is critical to successful establishment. The best situation is a level,

firm seedbed with adequate moisture. A seedbed with many large clumps results in poor seed placement and seed-soil contact. An overworked seedbed may be depleted of moisture and will crust easily, potentially inhibiting emergence.

- No-till planting is an option, and some long-term no-till producers have produced canola successfully. With proper drill settings, no-till planting usually results in adequate stands. However, maintaining stands over the winter can be difficult with low disturbance in heavy residue cover. This problem has been overcome by burning surface residue immediately before planting or by using a more aggressive drill setup that removes residue from the seed row. Research in south central Kansas over the last several years indicates that even with good winter survival, no-till canola yields under heavy residue are significantly lower than where residue has been burned or where tillage has been performed. No-till producers should ensure that drills are properly set and consider using a drill setup that creates a more disturbed seed row. Using a high-disturbance opener (such as a coulter or hoe-type opener) in no-till can improve winter survival.
- If using tillage, perform the most aggressive tillage as early as possible, with each succeeding tillage operation being shallower than the last. Incorporate fertilizer and herbicide with the last tillage operation. Some producers perform one aggressive tillage operation as early as possible and then control newly emerged weeds chemically. Planting into this “stale” seedbed works quite well.

### **Seeding Date, Rate, Depth and Row Spacing**

- The general rule is to plant canola six weeks before the average date of the first killing frost (28 degree F) in central and south central Kansas, or eight to ten weeks for southwest Kansas. This allows adequate time for plant growth to improve winter survival and canopy development. Planting too late will result in small plants with insufficient reserves to maximize winter survival. Planting too early may result in excessive growth that can deplete soil moisture and nutrient reserves. Excessive growth may also elevate the growing point or crown, increasing the chance of winterkill. This can be a problem when heavy residue is left in the seed row without tillage.
- This year, soils are very dry in many areas of Kansas and soil temperatures are warmer than usual. Hopefully this situation will change before it's time to plant canola. But if not, dryland producers should probably delay planting as long as possible until moisture conditions improve and soil temperatures cool. Producers should not wait too long, however. In central Kansas, winter canola should be planted by September 25. In south central Kansas, winter canola should be planted no later than the last week of September. In southwest Kansas, winter canola should be planted by September 7 at the latest to try to avoid winterkill problems. Irrigated producers should not delay their planting date beyond the optimum time because of unusually warm soil conditions. The precipitation outlook for the next three months is neutral, meaning that conditions are not expected to be unusually wet or dry. However the temperature outlook is above average, indicating that conditions are likely to be warmer than normal over the next three months.
- Winter canola will compensate for a poor plant stand; however, it is important to obtain as uniform a stand as possible to facilitate weed control and uniform plant maturity. A seeding rate of 5 pounds per acre is recommended for open-pollinated varieties. Because of the higher seed costs of hybrids, it is recommended to plant them on a pure live seed basis. The recommended seeding rate is 250,000 pure live seeds per acre. Hybrids tend to have increased seedling vigor, more vigorous branching, and a greater number of seed pods.
- It is important to check drill calibration. Some drills may require a speed reduction kit to obtain a five-pound rate without damaging seed. Some producers planting on 7.5-inch

spacing will plug every other row unit and plant on 15-inch spacing so the drill does not have to be slowed as much.

- Seed placement is critical for successful germination, emergence, and stand establishment. Best germination occurs with seed placed ½ to 1 inch deep. Under drier conditions, canola may be planted deeper (not greater than 1.5 inches), but delayed emergence and reduced vigor are likely. Soil crusting following a heavy rain can result in a poor stand. To ensure proper seeding depth, producers must plant slower than when planting wheat (preferably 5 mph or slower). Finally, it is important to check seeding depth in each field.
- Rows spaced between 6 and 15 inches are preferable for rapid canopy closure and weed control. Yields are similar with row spacings in this range, with good weed control.
- More producers are experimenting with canola planted in 30-inch rows. Producers are able to obtain more accurate depth control, precision seed metering, and residue removal from the seed row with row crop planters. As a general rule, yields may be reduced by 10% going from 15 inches to 30 inches under dryland conditions. However, producers are able to reduce their seeding rate to 2.5 to 3.5 lb per acre, eliminating some inner row competition among plants and saving on seed costs. Planting an open-pollinated variety or hybrid with prolific branching will also increase the profitability of canola planted in 30-inch rows.

### **Fertility**

- Soil testing, including a profile sample for nitrogen (N) and sulfur (S), is an important tool in determining fertilizer needs. If you have questions, contact your local Extension office. All nutrient applications should be made based on soil test recommendations.
- Fertility needs are similar to winter wheat; however, canola needs slightly higher levels of N and S.
- Applying high rates of fertilizer in-row at planting is not recommended because canola is sensitive to ammonia and salt damage. However, new research by Oklahoma State indicates that a low rate of DAP or MAP (30 to 40 lb/acre of product) is beneficial and not detrimental to stand establishment or yield. Drills that allow banding of fertilizers away from the row are also acceptable. Preplant broadcast application is the safest method.
- Lime: Apply lime so that pH is in the range of 5.5-7.0 and early enough so the lime has time to react.
- Phosphorus (P) and Potassium (K): No added P is required if the P soil test is above 30 ppm. Soil K levels are generally adequate in much of Kansas but deficiencies are increasing. Additional K should be applied if soil test levels are less than 125 ppm.
- Sulfur: Canola requires more S than wheat because of its high content of sulfur-containing proteins. Sulfur deficiencies are most common on coarse-textured and low-organic-matter soils. Sulfur can be applied at any time from preplant until the canola plant breaks dormancy in late winter. Apply S based on the soil test recommendation. Sulfate-sulfur (SO<sub>4</sub>-S) soil tests should be above 10ppm or fertilizer should be applied. If no soil test is available, an application of 20 lb/acre S is recommended.
- Nitrogen: Pre-plant N applications must be carefully balanced, as too little or too much fall-applied N may negatively affect winter survival. One-third to one-half of total N (based on expected yield) should be fall-applied. At least 35 lb/acre but no more than 80 lb/acre of actual N is the general rule for fall applications. Winter survival, plant vigor, and yield potential all can decrease without applying fall N.

### **Weed Management**

- A clean seedbed is critical to establishing winter canola. Canola seedlings compete poorly with established weeds. However, once a good stand and canopy are established, canola suppresses and outcompetes most annual weeds.
- No matter what herbicide program you use, the most important thing to remember is to control weeds early in the fall.
- Trifluralin and ethalfluralin are effective at controlling many common problem winter annual weeds, but each requires mechanical incorporation.
- Grass herbicides such as Select, AssureII, and Poast are labeled for cool-season grass control in canola.
- Roundup Ready (glyphosate tolerant) canola varieties are available, providing excellent control of many problem weeds. Glyphosate is not labeled for application once the plant has bolted after dormancy.
- Before applying any herbicides, care must be taken to ensure there are no traces of problem herbicides, such as sulfonylurea herbicides, in the sprayer equipment.

### **Insect Management**

- An insecticide seed treatment is highly recommended for control of green peach aphids and turnip aphids through January 1.
- Monitor canola stands for the following fall insect pests: grasshoppers, army cutworms, flea beetles, aphids, and root maggots. Several products are labeled and provide good to excellent control.

### **Disease Management**

- The best control of canola diseases is achieved through careful rotation. Canola should not be planted on the same field more than once every three years and should never be planted continuously.
- Blackleg (*Leptosphaeria maculans*) is the most serious disease threat to canola. Maintaining proper rotation intervals, planting disease-free seed, and using fungicide seed treatments are important management practices to slow the spread of blackleg.

For further information, see the newly revised *Great Plains Canola Production Handbook*, at your local Extension office, or: <http://www.ksre.ksu.edu/library/crps12/mf2734.pdf>

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### 3. Waiting periods before utilizing herbicide-treated soybeans for grazing or forage

As more folks consider grazing, haying, or ensiling their failed soybeans this year, they should be mindful of restrictions resulting from the herbicide(s) that were used on the crop, whether burndown, preplant, preemergence, or postemergence. There was a general discussion about soybeans for

forage in last week's (August 3, 2012) e-Update. The University of Missouri's Integrated Pest Management web site from July 19, 2012 includes a list of forage use restrictions for soybean herbicides, put together by Kevin Bradley, in UM's Division of Plant Sciences. .

The information below is can be accessed at:

<http://ipm.missouri.edu/IPCM/2012/7/Considering-Your-Grazing-Haying-and-Silage-Options-for-Herbicide-treated-Corn-and-Soybean/>

Be sure to follow these label restrictions. My advice is, if the label says not to do use herbicide-treated crops for grazing or forage use, then DON'T do it.

### Soybeans

<b>Waiting period before utilizing herbicide-treated soybean for grazing or forage (silage) use.</b>	
<b>Herbicide</b>	<b>Label Statement Pertaining to Interval Between Application and Grazing, Haying, or Feeding Herbicide-treated Soybean</b>
<b>2,4-D</b>	Consult individual label as product labels can vary. Do not cut for feed treated hay, forage, or fodder or graze treated soybeans to livestock.
<b>Alert</b>	Do not allow livestock to graze on treated soybean vines or feed treated vines or vine trash to livestock.
<b>Assure II</b>	Do not graze treated fields or harvest for forage or hay.
<b>Authority Assist</b>	Do not feed treated soybean forage, soybean hay or soybean straw to livestock.
<b>Authority First</b>	Do not feed treated soybean forage or soybean hay to livestock.
<b>Authority MTZ</b>	Do not graze treated soybean or harvest for forage or hay.
<b>Authority XL</b>	Do not feed treated soybean forage or soybean hay to livestock.
<b>Basagran</b>	Do not graze or cut treated soybean fields for forage or hay for at least 30 days after the last treatment.
<b>Boundary</b>	Do not graze or feed treated soybean forage for 40 days after application.
<b>Butyrac 200/ 2,4-DB</b>	Do not feed/graze soybean forage or harvest hay for 60 days following any 2,4-DB application.
<b>Canopy</b>	Do not graze treated fields or harvest for forage or hay.
<b>Canopy EX</b>	Allow 14 days after application before grazing or feeding forage or hay.
<b>Classic</b>	Do not graze treated fields or harvest for forage or hay.
<b>Cobra</b>	Do not graze treated fields or harvest for forage or hay.
<b>Command</b>	Do not allow livestock to graze on treated soybean vines or feed treated vines or vine trash to livestock.
<b>Dawn</b>	Do not graze treated areas or harvest for forage or hay.
<b>Dual II Magnum/Cinch</b>	Do not graze or feed treated soybean forage, hay, or straw to livestock 30 days following treatment.
<b>Extreme</b>	Do not graze or feed treated soybean forage, hay or straw to livestock.
<b>Encompass</b>	Do not graze treated fields or feed treated forage or hay to livestock.
<b>Enlite</b>	Do not graze treated fields or harvest for forage or hay.
<b>Envive</b>	Do not graze treated fields or harvest for forage or hay.
<b>FirstRate</b>	Do not apply within 14 days before harvest for forage or hay.
<b>Flexstar/ Flexstar GT</b>	Do not graze treated areas or harvest for forage or hay.
<b>Fusilade DX</b>	Do not graze or harvest for forage or hay.
<b>Gangster</b>	Do not graze treated fields or feed treated forage or hay to livestock.
<b>Gramoxone SL</b>	Preplant or Pre-emergence: Do not graze or harvest for forage or hay before the R3

	stage of soybean development (early pod). Spot Spray and postemergence directed sprays: 46 day forage or hay interval.
<b>Harmony</b>	Allow at least 7 days between application and grazing of treated forage. Allow at least 7 days between application and feeding of forage (green chop) from treated areas to livestock. Allow at least 30 days between application and feeding of dried hay from treated areas to livestock.
<b>Ignite</b>	Do not graze the treated crop or cut for hay.
<b>Liberty</b>	Do not graze the treated crop or cut for hay.
<b>Op Till</b>	Do not graze or feed treated soybean forage, hay or straw to livestock.
<b>Op Till Pro</b>	Do not graze or feed treated soybean forage, hay or straw to livestock.
<b>Outlook</b>	Do not graze or feed forage, hay, or straw to livestock.
<b>Phoenix</b>	Do not graze animals on green forage or stubble. Do not feed treated soybean silage (ensiled soybeans) to cattle. Do not utilize hay or straw for animal feed or bedding.
<b>Poast/Poast Plus</b>	Only processed meal from seed or hay may be fed to animals.
<b>Prowl/Prowl H2O</b>	Livestock can graze or be fed forage from treated soybean fields.
<b>Prefix</b>	Do not graze treated areas or harvest for forage or hay.
<b>Pursuit</b>	Do not graze or feed treated soybean forage, hay or straw to livestock.
<b>Python</b>	Do not graze or feed treated soybean forage, hay or straw to livestock.
<b>Raptor</b>	No grazing or forage restrictions listed.
<b>Resource</b>	Do not graze treated fields or harvest for forage or hay.
<b>Rhythm</b>	Do not graze treated areas or harvest for forage or hay.
<b>Roundup WeatherMax/other Roundup labels/other glyphosate labels</b>	Roundup WeatherMax - Allow a minimum of 14 days between final application and harvest of soybean grain or feeding of soybean grain, forage or hay. Consult individual glyphosate and Roundup product labels. There are individual differences among labels.
<b>Scepter</b>	Do not graze or feed treated soybean forage, hay or straw to livestock.
<b>Select Max</b>	Do not graze treated fields or feed treated forage or hay to livestock.
<b>Sencor/Metribuzin</b>	Treated vines may be grazed or fed to livestock 40 days after application.
<b>Sequence</b>	Do not feed treated soybean forage or hay for 30 days after application.
<b>Sharpen</b>	Soybean forage may be fed or grazed 65 or more days after application.
<b>Sonic</b>	Do not feed treated soybean forage or soybean hay to livestock.
<b>Storm</b>	Do not allow livestock to graze on treated forage. Do not feed treated vines.
<b>Synchrony XP</b>	Do not graze treated fields or harvest for forage or hay.
<b>Treflan</b>	Consult product labels. No apparent grazing or forage restrictions when applied in soybeans.
<b>Touchdown HiTech</b>	Do not graze or harvest for forage or hay.
<b>Ultra Blazer/Blazer</b>	Do not use treated plants for feed or forage.
<b>Valor SX/Encompass</b>	Do not graze treated fields or feed treated forage or hay to livestock.
<b>Valor XLT</b>	Do not graze treated fields or feed treated forage or hay to livestock.
<b>Verdict</b>	Do not graze or feed forage, hay, or straw to livestock.

Source: Kevin Bradley, Division of Plant Sciences, University of Missouri

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#### 4. Southwest Research-Extension Center at Tribune to host Fall Field Day Aug. 21

The Southwest Research-Extension Center at Tribune will host its Fall Field Day on Tuesday, August 21 at the irrigation field.

Registration begins at 8:30 a.m. MDT. The field presentations begin at 9 a.m. Indoor seminars begin at 11:15 a.m., followed by a sponsored lunch at the 4-H building at the Fairgrounds in Tribune.

Field tour presentations include:

- \* No-till crop rotations with limited irrigation
- \* Crop rotation affects soil carbon and nitrogen stocks under limited irrigation
- \* Limited irrigation for new corn hybrids with increased drought tolerance
- \* Kochia management
- \* Field peas and safflower as fallow alternatives

Indoor seminars include:

- \* Measurement of soil water in producer fields in western Kansas
- \* Long-term nitrogen and phosphorus fertilization of irrigated corn on soil properties
- \* Update on the 2012 Farm Bill

Presenters include:

- \* Ardell Halvorson, Soil Scientist, USDA-ARS, Ft. Collins, CO
- \* Curtis Thompson, K-State Weed Management Specialist
- \* Lucas Haag, K-State Graduate Research Assistant
- \* Freddie Lamm, Irrigation Engineer, Northwest Research-Extension Center
- \* Troy Dumler, Agricultural Economist, Southwest Research-Extension Center
- \* Alan Schlegel, Agronomist-In-Charge, Southwest Research-Extension Center, Tribune

The Southwest Research-Extension Center at Tribune irrigation field is 4 miles east of Tribune (to Whitelaw), then 4.5 miles north and 1 mile east. More information is available by calling 620-376-4761.

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#### 5. Agricultural Research Center - Hays Fall Field Day Aug. 22

The Agricultural Research Center – Hays will host its Fall Field Day, Wed., August 24 at the Center, located at 1232 240<sup>th</sup> Ave. in Hays.

The day begins at 8:30 a.m. with registration, coffee and donuts, followed by the program at 9 a.m. A complimentary lunch will be served for all participants. The program will adjourn at 2 p.m. All events will be held in the auditorium.

Presentation topics and presenters include:

- \* Historical Perspective for 2011-2012 Drought – Bob Gillen, Head, Western Kansas Agricultural Research Centers
- \* Water Requirements for Western Kansas Crops – Loyd Stone, K-State Soil Scientist
- \* Drought Impacts on Sorghum Growth – Ramasamy Perumal, Agricultural Research Center-Hays
- \* Conserving Moisture with Tillage and Residue Management – DeAnn Presley, K-State Soil Management Specialist
- \* Alternative Row Spacing and Plant Populations – Lucas Haag, K-State Graduate Research Assistant
- \* Crop Rotation and Fallow Efficiency – Rob Aiken, Northwest Research-Extension Center
- \* Managing Weeds Under Stressful Conditions – Phil Stahlman, Weed Scientist, Agricultural Research Center-Hays
- \* The Challenge of High Nitrates in Corn and Sorghum Silage – John Jaeger, Beef Cattle Scientist, Agricultural Research Center-Hays

More information is available by contacting the research center at 785-625-3425. More information about the center is available [online](#).

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## 6. Southwest Research-Extension Center at Garden City Field Day Aug. 23

The Southwest Research and Extension Center will host its Fall Field Day 2012 on Thursday, August 23. The Center is located at 4500 E. Mary St. in Garden City.

The event begins at 8 a.m. with registration, coffee and doughnuts, as well as agricultural product displays. The morning tours start at 9:30 a.m. Afternoon seminars begin at 1 p.m. A complimentary lunch, sponsored by exhibitors, will be provided.

Field tour and seminar topics include:

- \* Comparisons of Weed Control in Irrigated Corn With 60 Herbicide Tank Mixes – Randall Currie, Weed Scientist, Southwest Research-Extension Center
- \* Herbicide-Resistant Commercial Quality Sorghum Variety for Post-Emergence Grass Control– Randall Currie
- \* Roundup-Resistant Kochia Control With 44 Herbicide Tank Mixes in Fallow, Sorghum, Corn, and Wheat – Randall Currie
- \* Broadleaf Weed Control in Irrigated Sorghum – Randall Currie
- \* Impact of Late-Season Corn Stand Reductions – Lucas Haag, K-State Graduate Research Assistant, and John Holman, Agronomist, Southwest Research-Extension Center
- \* Nitrogen Rate, Source, and Placement for Grain and Forage Sorghum – John Holman
- \* Dryland Field Pea and Safflower as Potential Alternatives to Fallow – Lucas Haag and John Holman
- \* Results of Multi-Year Regional Study of Roundup-Resistant Kochia Control – Phil Stahlman, Weed Scientist, Agricultural Research Center-Hays
- \* Economics of Tillage Versus No-till for Roundup-Resistant Kochia – Troy Dumler, Agricultural Economist, Southwest Research-Extension Center

More information about the field day is available by calling your local County Research and Extension Office or email Randall Currie at: [rscurrie@ksu.edu](mailto:rscurrie@ksu.edu)

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#### 7. Comparative Vegetation Condition Report: July 24 – August 6

K-State's Ecology and Agriculture Spatial Analysis Laboratory (EASAL) produces weekly Vegetation Condition Report maps. These maps can be a valuable tool for making crop selection and marketing decisions.

Two short videos of Dr. Kevin Price explaining the development of these maps can be viewed on YouTube at:

<http://www.youtube.com/watch?v=CRP3Y5NIggw>

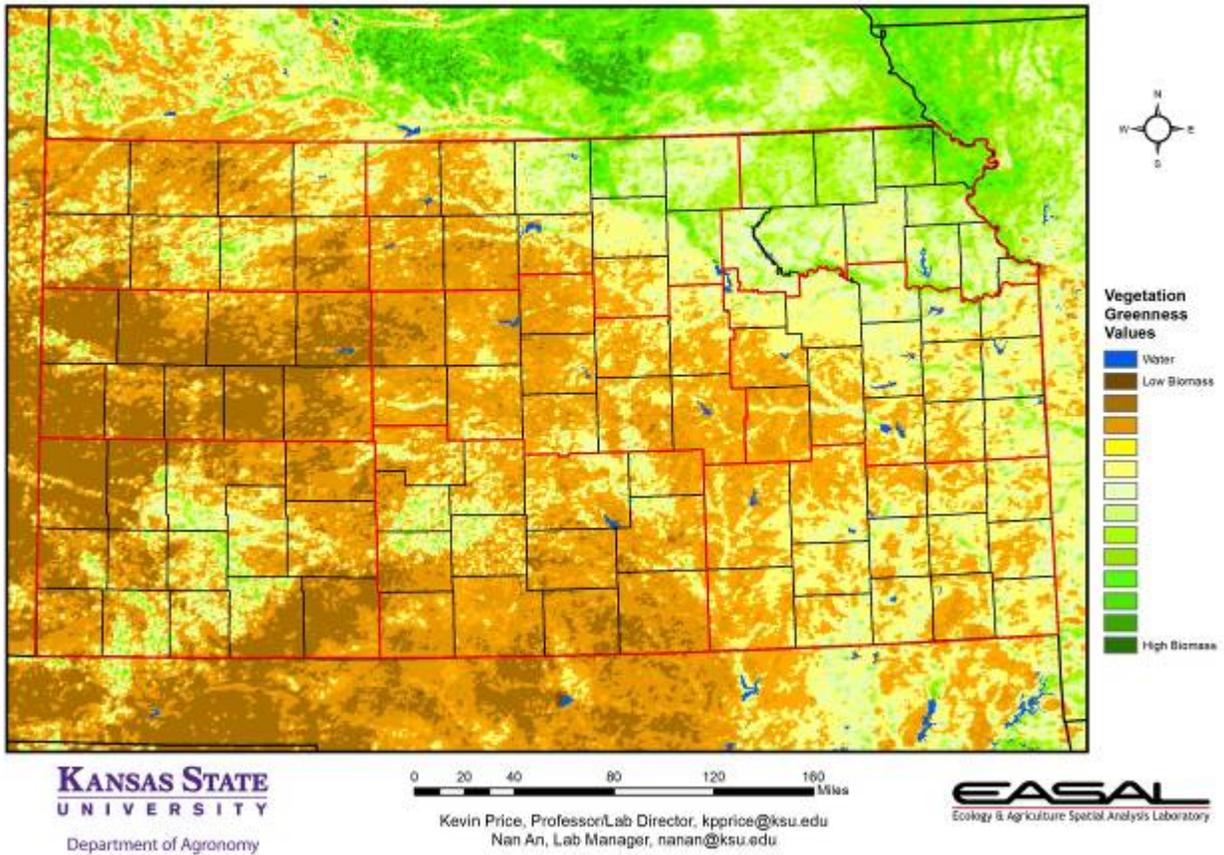
<http://www.youtube.com/watch?v=tUdOK94efxc>

The objective of these reports is to provide users with a means of assessing the relative condition of crops and grassland. The maps can be used to assess current plant growth rates, as well as comparisons to the previous year and relative to the 21-year average. The report is used by individual farmers and ranchers, the commodities market, and political leaders for assessing factors such as production potential and drought impact across their state.

The maps below show the current vegetation conditions in Kansas, the Corn Belt, and the continental U.S, with comments from Mary Knapp, state climatologist:

# Kansas Vegetation Condition

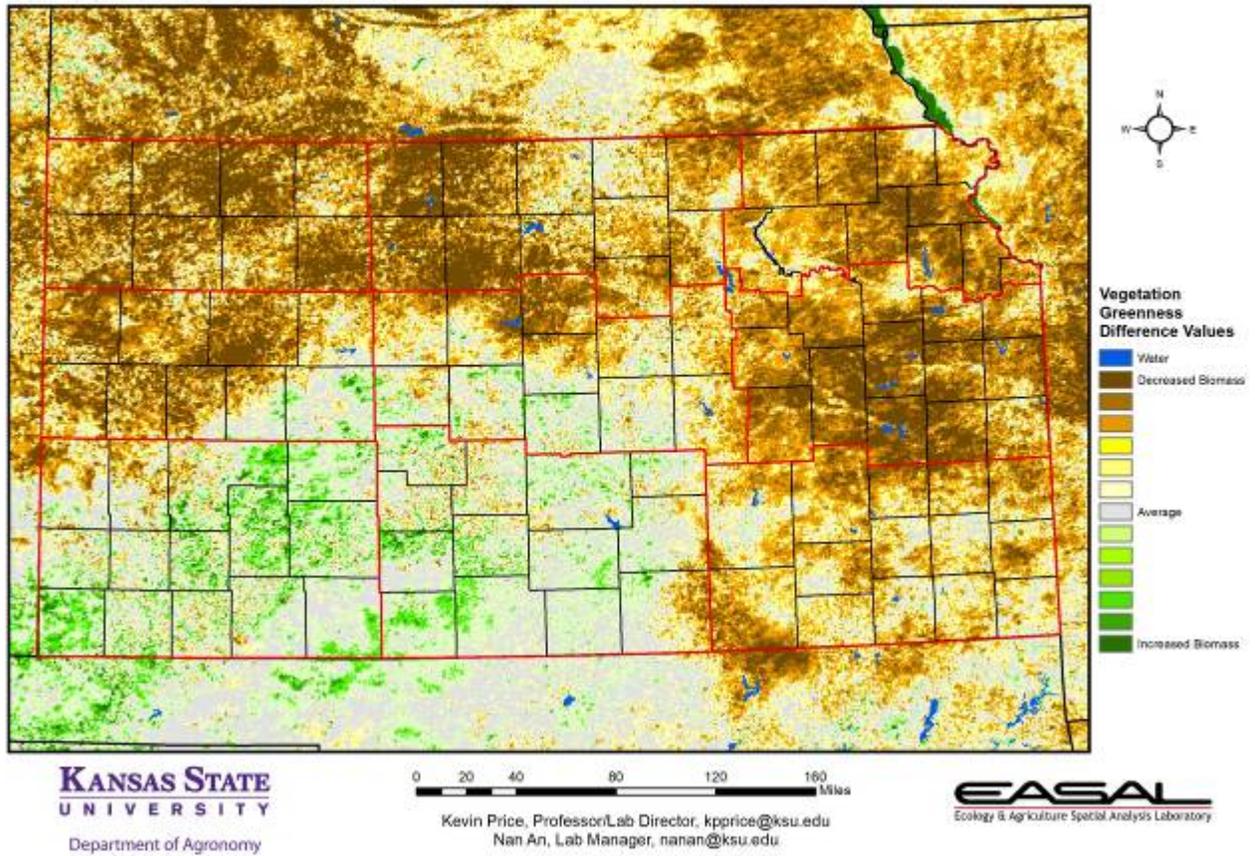
Period 31: 07/24/2012 - 08/06/2012



Map 1. The Vegetation Condition Report for Kansas for July 24 – August 6 from K-State’s Ecology and Agriculture Spatial Analysis Laboratory shows active biomass production is confined to a small portion of northeast and north central Kansas. This is an area that, while drier than average, has had more rainfall than the rest of the state. Also noticeable are the higher NDVI values along the Republican River Valley.

# Kansas Vegetation Condition Comparison

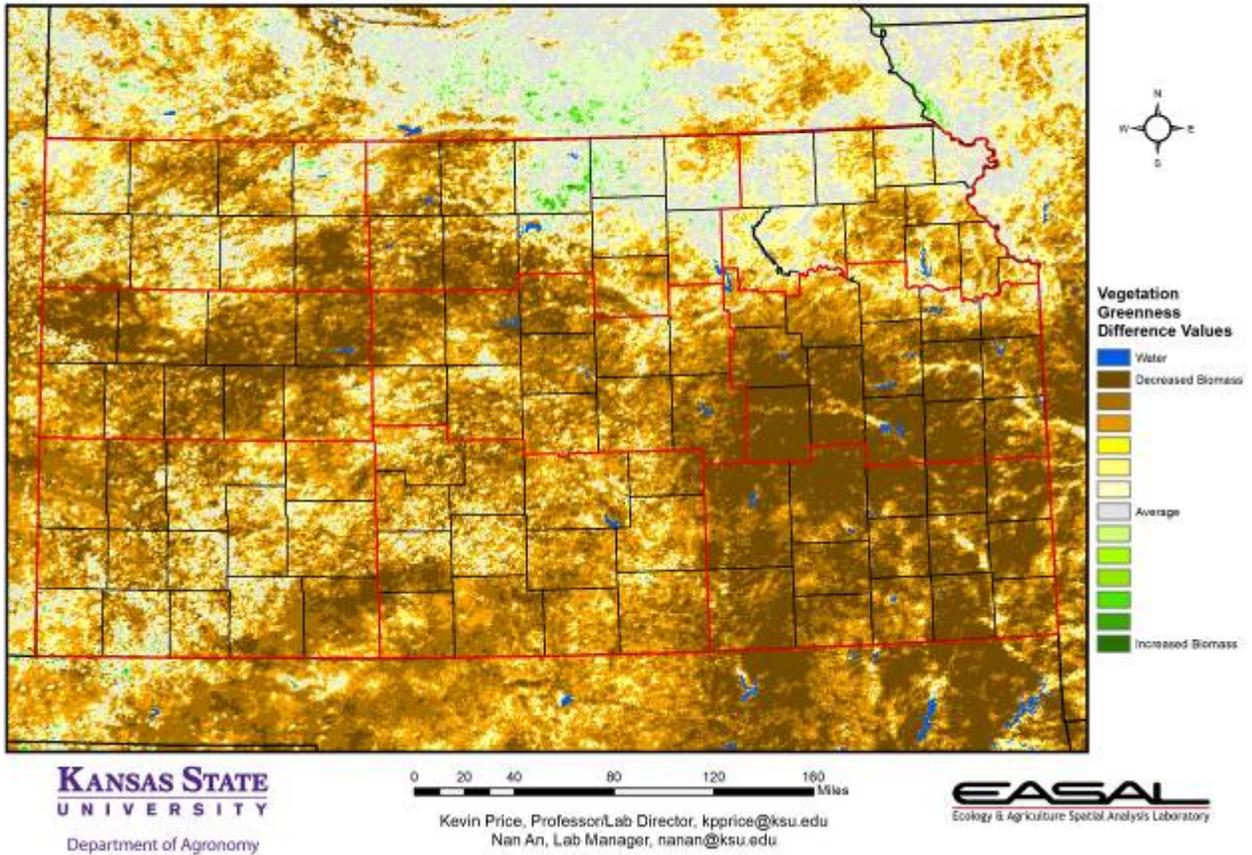
Late-Jul/Early-Aug 2012 compared to the Late-Jul/Early-Aug 2011



**Map 2. Compared to the previous year at this time for Kansas, the current Vegetation Condition Report for July 24 – August 6 from K-State’s Ecology and Agriculture Spatial Analysis Laboratory shows that, as bad as conditions are this year, the Southwest and South Central Divisions are showing more productivity. Again, this does not indicate good biomass production this year; just that last year’s conditions were the extremely poor.**

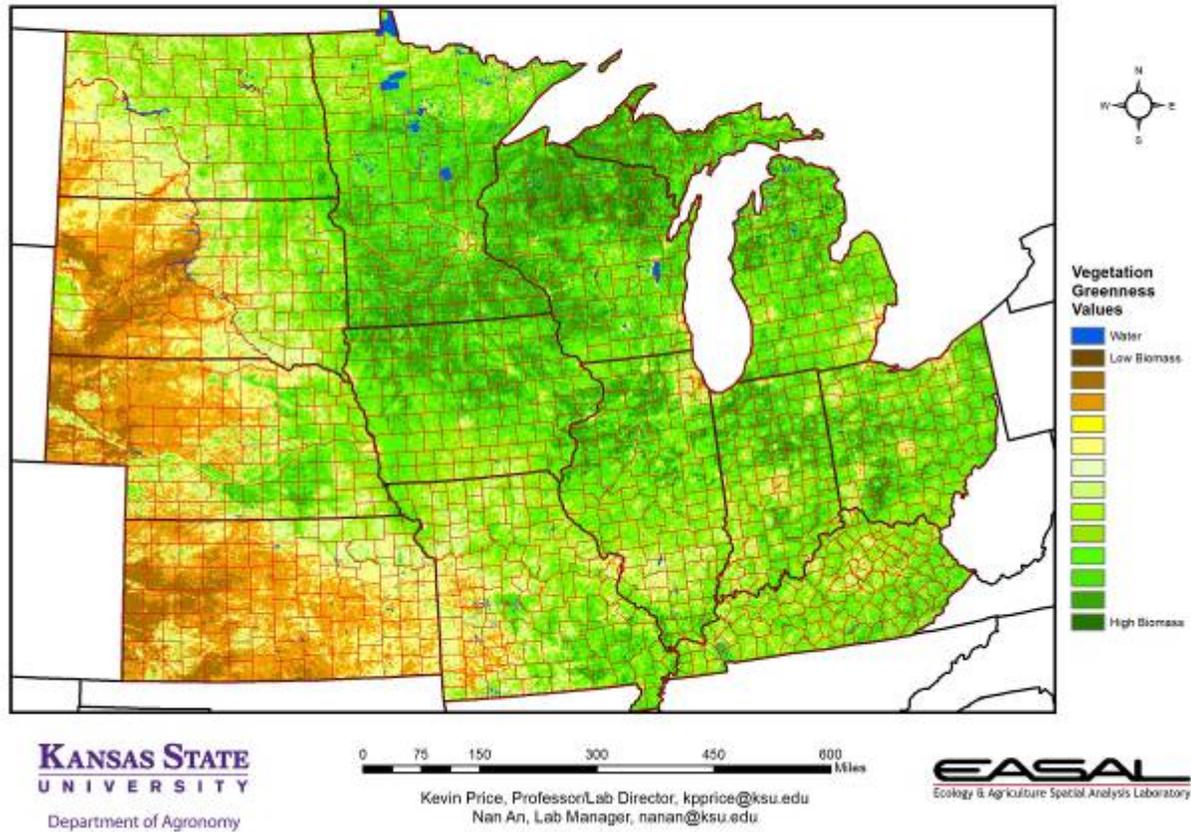
## Kansas Vegetation Condition Comparison

Late-Jul/Early-Aug 2012 compared to the 23-Year Average for Late-Jul/Early-Aug



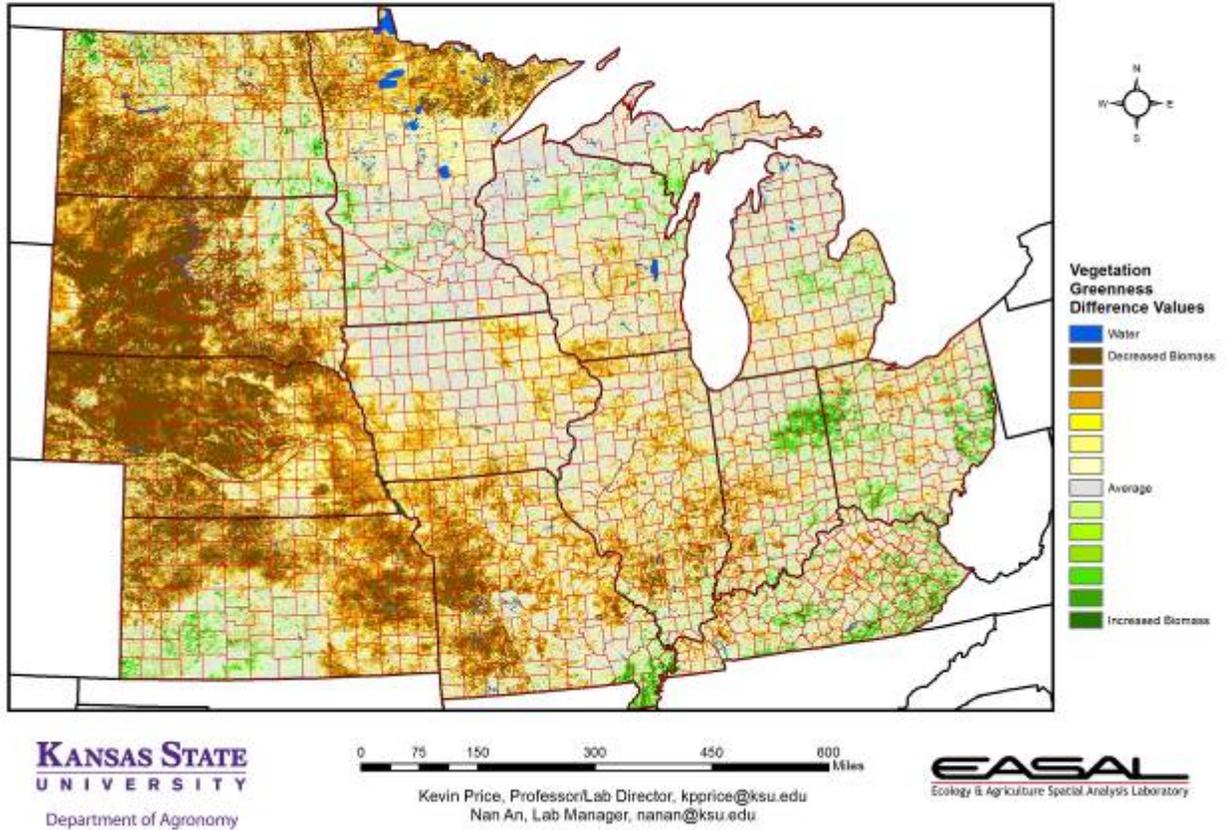
**Map 3. Compared to the 23-year average at this time for Kansas, this year's Vegetation Condition Report for July 24 – August 6 from K-State's Ecology and Agriculture Spatial Analysis Laboratory shows that only a very small portion of north central Kansas has near-average photosynthetic activity. Stations in that area reported over 2.50 inches for this two-week composite period, while many locations in east central and southeast Kansas reported no rain at all during the period.**

U.S. Corn Belt Vegetation Condition  
Period 31: 07/24/2012 - 08/06/2012



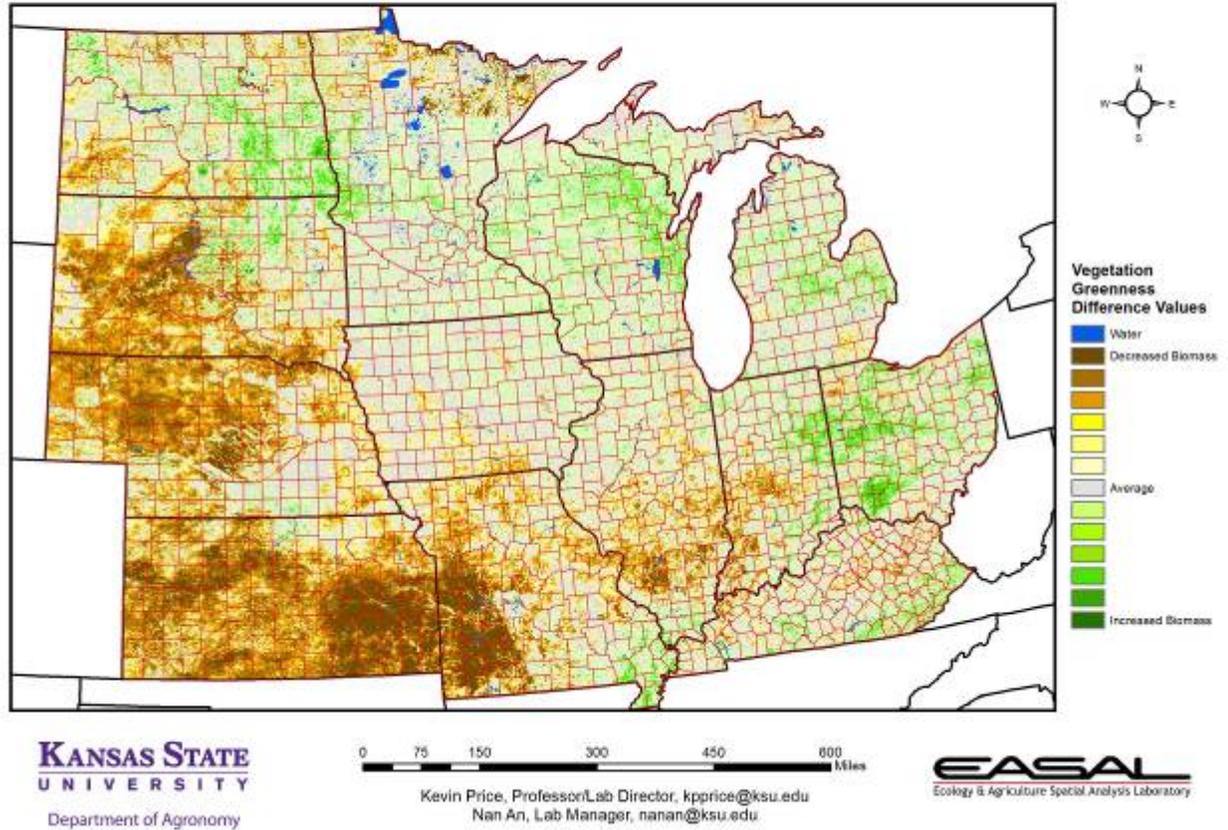
**Map 4. The Vegetation Condition Report for the Corn Belt for July 24 – August 6 from K-State’s Ecology and Agriculture Spatial Analysis Laboratory shows that the upper reaches continue to have the greatest photosynthetic activity. In northeastern Wisconsin, soil moisture is reported as 60 percent adequate. In contrast, only 6 percent of Kansas soil moisture is reported as adequate, with 69 percent reported as very short.**

**U.S. Corn Belt Vegetation Condition Comparison**  
 Late-Jul/Early-Aug 2012 Compared to Late-Jul/Early-Aug 2011



**Map 5. The comparison to last year in the Corn Belt for the period July 24 – August 6 from K-State’s Ecology and Agriculture Spatial Analysis Laboratory shows the major switch in moisture conditions. Last year the Northern Plains was enjoying more favorable moisture conditions, with the result of greater biomass production. In the central Corn Belt pockets of greater productivity reflect the excess moisture that was a problem last year. Currently, Indiana is reporting 73 percent of the corn in poor to very poor condition.**

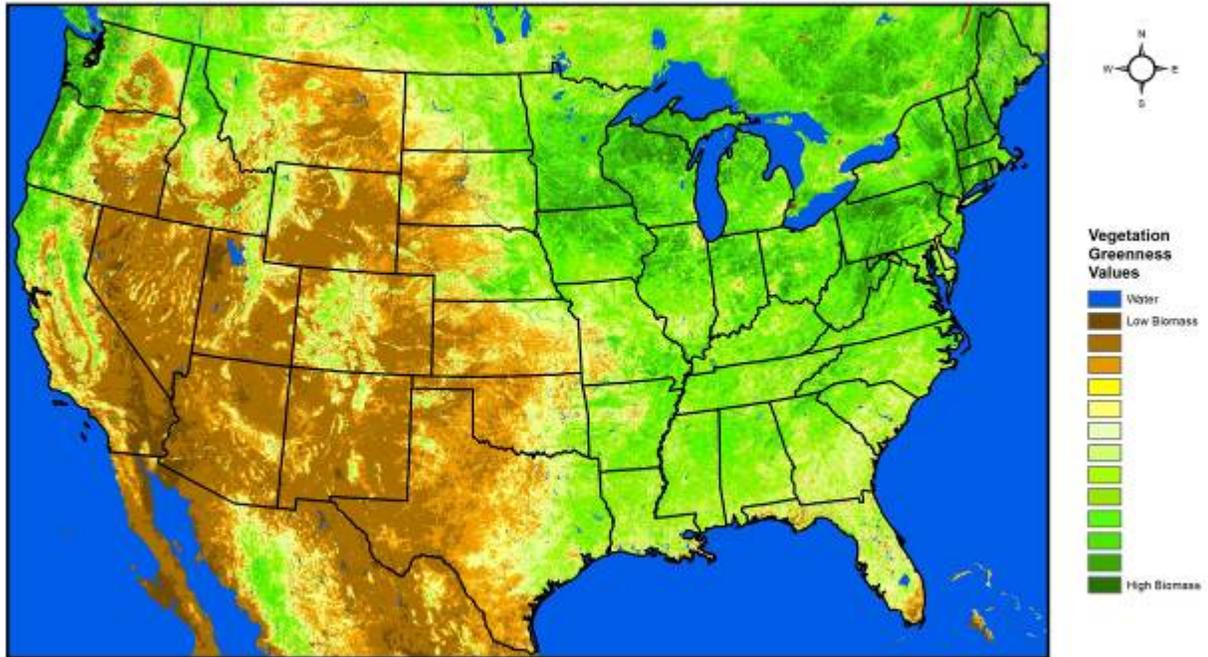
U.S. Corn Belt Vegetation Condition Comparison  
Late-Jul/Early-Aug 2012 Compared to the 23-Year Average for Late-Jul/Early-Aug



Map 6. Compared to the 23-year average at this time for the Corn Belt, this year's Vegetation Condition Report for July 24 – August 6 from K-State's Ecology and Agriculture Spatial Analysis Laboratory shows only a small portion of the northern and eastern region at slightly above normal productivity. As we move into the fall season, normal drydown patterns will mask the worsening drought conditions.

## Continental U.S. Vegetation Condition

Period 31: 07/24/2012 - 08/06/2012



**KANSAS STATE**  
UNIVERSITY  
Department of Agronomy

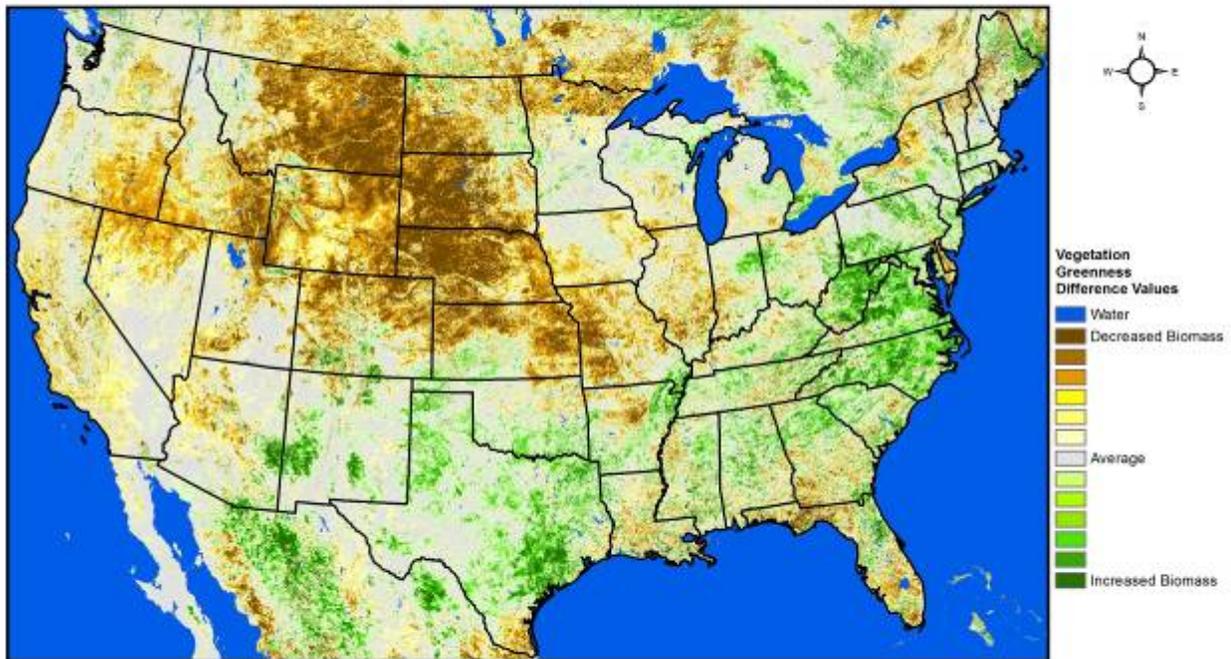
0 180 360 720 1,080 1,440 Miles

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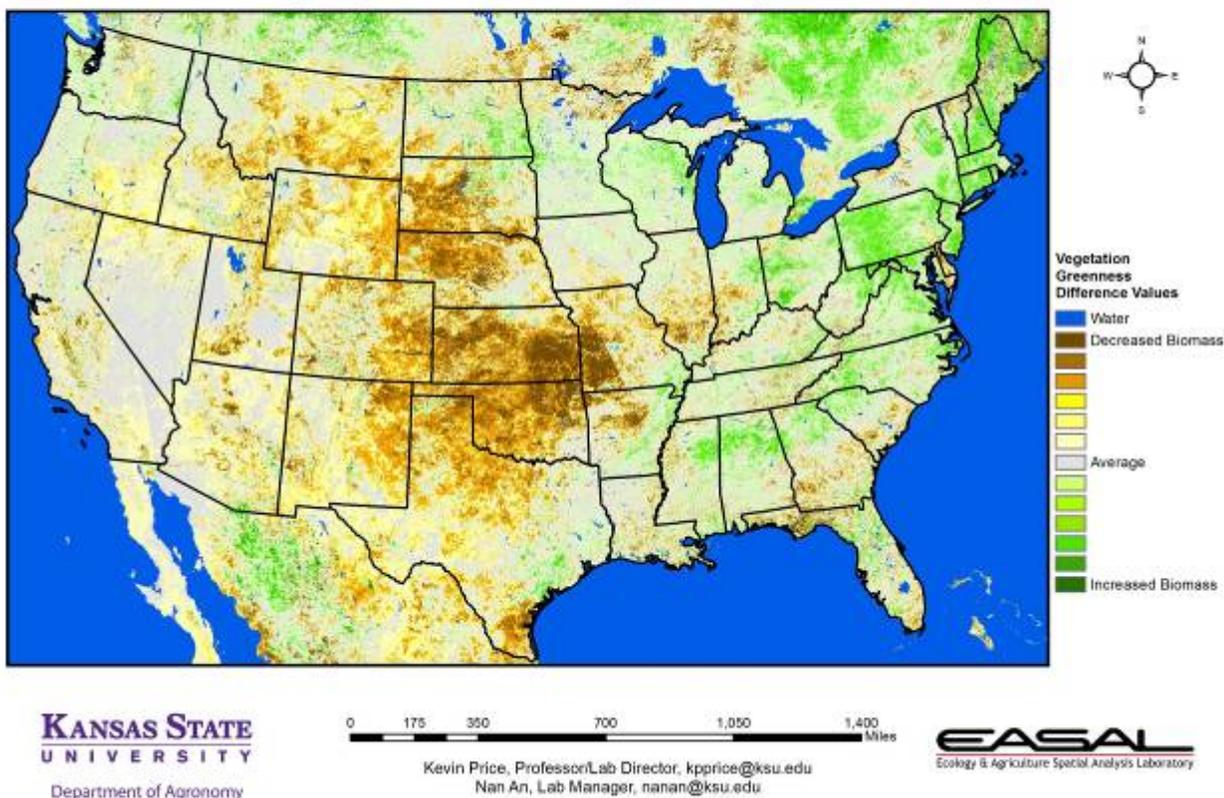
**Map 7. The Vegetation Condition Report for the U.S. for July 24 – August 6 from K-State’s Ecology and Agriculture Spatial Analysis Laboratory shows that greatest photosynthetic activity continues to be in the New England region and along the Pacific Northwest. The western High Plains continues to show very little biomass production, as the dry conditions continue to reduce production.**

Continental U.S. Vegetation Condition Comparison  
Late-Jul/Early-Aug 2012 Compared to Late-Jul/Early-Aug 2011



**Map 8.** The U.S. comparison to last year at this time for the period July 24 – August 6 from K-State’s Ecology and Agriculture Spatial Analysis Laboratory shows the greatest decrease in productivity is in the upper High Plains. These areas had very favorable conditions last year, which makes this year’s drought that much more dramatic. Again, the increased biomass production in Texas and Oklahoma compared to last year is not indicative of good conditions this year, as the productivity last year was extremely poor.

**Continental U.S. Vegetation Condition Comparison**  
 Late-Jul/Early-Aug 2012 Compared to 23-year Average for Late-Jul/Early-Aug



**Map 9. The U.S. comparison to the 23-year average for the period July 24 – August 6 from K-State’s Ecology and Agriculture Spatial Analysis Laboratory shows that decreased biomass production is centered in the Plains, with Kansas and Missouri showing the greatest departure from average productivity. North and South Carolina also show an area of below-average vegetative condition. This is an area that has been in extreme to exceptional drought for most of the summer.**

Note to readers: The maps above represent a subset of the maps available from the EASAL group. If you’d like digital copies of the entire map series please contact us at [kpprice@ksu.edu](mailto:kpprice@ksu.edu) and we can place you on our email list to receive the entire dataset each week as they are produced. The maps are normally first available on Wednesday of each week, unless there is a delay in the posting of the data by EROS Data Center where we obtain the raw data used to make the maps. These maps are provided for free as a service of the Department of Agronomy and K-State Research and Extension.

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These e-Updates are a regular weekly item from K-State Extension Agronomy and Steve Watson, Agronomy e-Update Editor. All of the Research and Extension faculty in Agronomy will be involved as sources from time to time.  
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