

River Valley District

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K-State Research and Extension News

Knowledge ^{for}Life

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WILDFIRE – IT COULD HAPPEN TO US TOO!

It has been heartbreaking to watch the devastation caused by the recent wildfires across the state of Kansas. As with many disasters, our hearts go out to those people, but as we sit safely in our homes we often act as if it could never happen to us. It could happen to us too, so we need to do our best to be prepared.

K-State Research and Extension; the State Fire Marshall; the Kansas Forest Service; and Ready, Set, Go just recently published an updated bulletin entitled "Your Personal Wildland Fire Action Guide" that is a great resource to help families prepare a defensible space around your property and to develop a Ready, Set, Go action plan.

Wildland Fires are a growing problem in Kansas. We tend to think of the huge fires that we have had in SC and SW Kansas the past couple of years, and as devastating as those are on a massive scale, wildfires can cause devastation and financial hardships on a more localized and smaller scale as well, so we need to be prepared. On any given low-humidity, highwind day in the spring in Kansas our local, volunteer rural fire departments can be stretched beyond their physical and mechanical abilities to fight the number of fires that may be happening at one time.

It is therefore, imperative that each of us create a defensible space around our rural homes. Zone 1 is 0-30 feet around the home and buildings. The first 0-5 feet around these structures it is wise to use hard surfaces such as concrete or non-combustible, rock mulch to prevent fires from getting up close to the structure. Use non-woody, low-growing, herbaceous vegetation and succulent plants and ground covers. If you use ornamental grasses, then make sure these are trimmed down and all dry material removed as we move into high risk times of the year for fires.

Zone 2 is 30 to 100 feet around the structures. In this area, remove leaf and needle debris, mow grasses down in the fall to prevent dry fuel, and remove ladder fuels that would cause a fire to climb from ground level into the trees. Create vegetation islands as you landscape. The breaks between vegetation groups can provide places that are more defensible in case of fires.

Zone 3 is 100 to 200 feet around the home and buildings. In this area, keep grass and wild-flowers trimmed down to a height of under 8 inches. Plant and/or prune to keep a minimum of 10 feet between tree tops. Remove ladder fuels and remove all dead trees and shrubs.

Here are a few general tips. Weed around the property. Remove leaf litter and debris from around the foundation. Create a clean space with no fuel in an area 10 feet around the propane tank. Trim trees and shrubs. Remove flammable materials stored under decks and carports.

Finally, create your own Ready, Set, Go plan to help you be ready, be prepared, and act early in case a wildland fire threatens your property. Pick up your Ready, Set Go Action Guide at any K-State Research and Extension Office today.

Let's continue to keep our neighbors in our thoughts and prayers. As we send hay and fencing supplies to the devastated farms and ranches, let us not forget that many non-ag families lost everything as well. Consider donations through your local churches and other organizations to help those in need. While at it, support and thank your local fire department and emergency response units. Remember, it could happen to us too!

KANSAS STATE UNIVERSITY AGRICULTURAL EXPERIMENT STATION AND COOPERATIVE EXTENSION SERVICE

CORN SEEDING RATE RECOMMENDATIONS

The optimal corn seeding rate for any situation will depend on the anticipated environment and how the hybrid responds to that environment. Thus, optimum seeding rate depends on the hybrid (genotype, G) and the interaction with the environment (E), in something that researchers want to term as the G x E interaction. Producers can look back to their corn crop from the previous growing season, or wait until the current growing season is nearly complete, and evaluate whether the population they used was adequate. Another factor that sometimes we neglect to mention is the effect of management practices (M component). Planting date, row spacing, crop rotations can also exert some influence on the yield response to the plant population factor.

Individual hybrids can respond differently, but the following guidelines may help in deciding if current seeding rates need to be adjusted. If more than about 5% of the plants are barren or if most ears have fewer than 250 kernels per ear, the population may be too high. If there are consistently more than 600 kernels per ear or if most plants have a second ear contributing significantly to grain yield, the population may be too low. Of course the growing conditions will influence ear number and ear size as well, so it is important to factor in the growing conditions for that season when interpreting these plant responses. In addition to the growing conditions, nutrient status can also exert some influence on the final number of grains per ear. For example, severe nitrogen (N) deficiency will have a high impact on the final number of grains, ear size and ear number.

Don't be too concerned if a half-inch or so of the ear tip has no kernels. If kernels have formed to the tip of the ear, there may have been room in that field for more plants contributing to grain yield. Again, "tipping back" will vary with the G x E x M interaction. Potential ear size and potential number of kernel (1,000-1,200 per ear) are set before silking, but the actual final number of kernels is not determined until after pollination and early grain fill (lack of fertilization and early abortion of grain number).

Always keep the long-term weather conditions in mind. In a drought year, almost any population is too high for the available moisture in some areas. Although it's not a good idea to make significant changes to seeding rates based only on what has happened recently, it is worthwhile taking into consideration how much moisture there is currently in the soil profile and the long-term forecasts for the upcoming growing season.

Making a decision on whether to keep seeding rates at your usual level or cutting back somewhat this year if the soil profile is drier than normal is a little like the famous line in the movie Dirty Harry: "How lucky do you feel?" If you think weather conditions will be more favorable for corn this year than the past years, stay about in the middle to upper part of the range of seeding rates in the table below. If you do not think growing conditions will improve enough to make up for dry subsoils, you might want to consider going toward the lower end of the range of recommended seeding rates, with the caveat that if growing conditions improve you will have limited your top-end yield potential.

Optimal seeding rates may need to be adjusted for irrigated corn if fertilizer or irrigation rates are sharply increased or decreased. For example, research at the Irrigation Experiment Field near Scandia has shown that if fertilizer rates are increased, seeding rates also have to be increased to realize the maximum yield benefit. Consult seed company recommendations to determine if seeding rates for specific hybrids should be at the lower or upper end of the recommended ranges for a given environment.

The recommended planting rates in the following tables attempt to factor in these types of questions for the typical corn growing environments found in our area. Adjust within the recommended ranges depending on the specific conditions you expect to face and the hybrid you plan to use. These recommended planting rates are from the K-State Corn Production Handbook, C-560, which can be picked up at any River Valley office or on the K-State Research and Extension website at: <u>http://</u>www.ksre.ksu.edu/library/crpsl2/c560.pdf

Area **Environment Final Plants Per Acre Popula-**Seeding Rate* tion Northeast Area 100-150 Bu/A potential 22,000-25,000 26,000-29,500 Northeast Area 150+ BU/A potential 24,000-28,000 28,000-33,000 North Central Area All dryland environments 20,000-22,500 23,500-26,500

Suggested Dryland Corn Final Populations and Seeding Rates

Suggested Irrigated Corn Final Populations and Seeding Rates

Environment	Hybrid Maturity	Final Plants Per Acre Popula- tion	Seeding Rate*
Full Irrigation	Full Season	28,000-34,000	33,000-40,000
Full Irrigation	Shorter Season	30,000-36,000	35,000-42,500
Limited Irrigation	All	24,000-28,000	28,000-33,000

* Assumes high germination and that 85 percent of seeds produce plants. Seeding rates can be reduced if field germination is expected to be more than 85%.

RESISTANT WEEDS? CONSULT THE 2017 CHEMICAL WEED CONTROL GUIDE

Difficult weeds, especially glyphosate-resistant weeds, are controlled most consistently with soil-applied herbicides which kill germinating seeds/seedlings. Much of the resistance to glyphosate has developed from overreliance on postemergence herbicide applications for weed control. Thus it is essential to include one or more of the preplant and preemergence residual herbicides available for corn. The specific herbicide you use, although important, is usually less important than just making the decision to use a preplant or preemerge herbicide. It is important to use multiple modes of action when selecting herbicides. To assist growers, we have included in this article a reference number in parentheses that corresponds to the herbicide's mode of action. For example, the reference number herbicide mode of action for glyphosate is No. 9, and will be referred to in this article as "glyphosate (9)." There is a key to all herbicide modes of action at the end of this article. When there are two or more numbers in parentheses, it means the active ingredients in a product have different modes of action. If a herbicide is mentioned more than once in a paragraph, we include the reference number only after the first mention of the product in that paragraph.

It is important to change herbicide programs from time to time so that you do not get hooked on any single herbicide program year after year. Weed species shift and develop resistance to herbicide programs that do not change. It's also important to know the strengths and weaknesses of each product in terms of the spectrum of weeds controlled. A table summarizing weed species response to various corn herbicides can be found on pages 24-26 of 2017 Chemical Weed Control for Field Crops, Pastures, Rangeland, and Noncropland (SRP 1132). See: http://www.bookstore.ksre.ksu.edu/pubs/ chemweedguide.pdf

WHEAT GRAZEOUT-AN OPTION FOR 2017?

By the time you as a wheat producer read this the typical spring wheat pasture grazing season will have passed and wheat will be in the jointing phase of growth. However, with the current price of wheat most, if not all, production scenarios for wheat show this enterprise losing money for the 2016-17 crop. Some producers are considering options that might include eliminating the growing wheat and planting a summer crop such as dryland corn. In these cases, graze-out of the growing winter wheat might be a viable option to consider. Factors affecting the decision of whether to graze out or harvest for grain yield include estimates of future wheat grain yield, prices of wheat and beef, stocking rate and stocker

gains, weather, and grazing length during the spring. Most of these factors are field-specific and need to be customized for each producer-field situation.

Potential grain yield - Wheat grain yield cannot be estimated with complete accuracy at this early stage of growth. However, there are ways to make a good estimate. A good start is to look at the yield record from the last 5-10 years for each field. The long-term average yield can provide a good estimate of expected yield from a particular field, and the expectations for this year's crop. At the time of this writing, the crop reports for wheat in NC Kansas show it in good condition. However, if lower yields are expected, producers would need to consider whether it would be better to graze these fields out or potentially receive a lower yield and potential crop insurance payment. Remember that grazing past the insurance deadline will make the crop ineligible for an insurance claim.

Stocking rate and stocker gains - Producers planning for crop graze-out, generally increase stocking rates to as much as 1,000 pounds of live animal per acre. Average stocker gains range from 1.5 to 2.5 pounds per day, which in part depends on the amount of forage available.

Weather – The weather that we experience throughout the spring will influence this graze-out versus harvest for grain decision. Warm and moist conditions will favor vegetative growth available for grazing. Hot and dry conditions will reduce growth available for grazing and may cause concern for the potential of planting a summer crop after graze-out. An extended period of relatively cool temperatures and good soil moisture can often help wheat reach its full yield potential as we move into grain filling. Therefore, producers will need to put on their weather forecasting hat as they make the graze-out decision.

Grazing length during the spring – As we move later in the

spring to make the graze-out decision we must consider if there will be a wide enough grazing window to receive economic benefit from the graze-out.



Scenario analysis - Producers are

encouraged to perform a scenario analysis based on each field's history. A spreadsheet for analysis is available at: <u>http://www.agmanager.info/wheat-grazeout-partial-budget</u>.

All inputs in blue should be adjusted to fit the producer's own scenario.

Planting a spring crop after wheat graze-out - Another key item to consider is that by grazing out wheat, a spring crop could be planted, if desired and if herbicide carryover considerations allow. Crop insurance final planting dates for soybeans and grain sorghum both leave an adequate window to do this (The crop insurance agent must have been notified by March 15th). Depending on moisture conditions, this might even make the high-yielding scenario attractive to grazeout instead of carrying the crop to grain yield, as the reduced income could be made up for with returns from another crop.

Thanks to Romulo Lollato, Wheat and Forages Specialist; John Holman, Southwest Research-Extension Center Cropping Systems Agronomist; Robin Reid, Extension Associate, Agricultural Economics for the information provided in this 3 article.

EMERGING PROBLEMATIC PASTURE SPECIES– OLD WORLD BLUESTEM AND BLACKBERRY CONTROL

As I drive around the district looking at pastures, I have noticed that Old World Bluestem is rearing its ugly head again. By no means do I have the end all be all solution to eradicate Old World Bluestem. However, I do have a few tips that will gradually help thin out the stand.

The first management practice to implement is to attempt mob grazing or intensively grazing the areas that contain the most Old World Bluestem. I do realize that sometimes this isn't realistic with regards to water availability, so this might not be practical for all producers. It has also been observed that cattle will no longer graze this specie after it hits a certain maturity. The time in which the palatability of Old World Bluestem is highest is during the months of May and June. The leaf to stem ratio drops below one in as little as 45 days and the forage becomes mostly stems. The forage quality is similar to prairie hay but the digestibility and palatability are lower than that of prairie hay.

The second management practice is to implement a good burning program. This management practice alone has not proven to thin out Old World Bluestem stands. However, this will improve forage availability in the pasture as a whole and will assist in the next step of thinning out this problematic specie.

The final management practice is to apply herbicide to the affected area following a burn. It is recommended that the herbicide be applied at approximately 6 inches of growth. The recommended rate of application is ½ lb per acre of Arsenal with the active ingredient being Imazapyr. At the recommended rate, Imazapyr is selective with most native grasses and forbs surviving treatment.

As stated previously, this is by no means an end all be all solution for Old World Bluestem. However, these management practices, when implemented together, will slowly begin to thin out the stand. after the blackberries leaf out will actually do more damage than good. However, success has been found in controlling blackberries by burning in April and treating with herbicide 4 to 6 weeks following the burn. In this case, the recommended herbicides would be Remedy Ultra + 2,4-D (1 pt. + 2 pt.) in 20 gallons per acre of spray solution. Results for this type of treatment were about 70-80% control, and this was more effective than burning or applying the herbicide alone.



Wild Blackberry Stand

Other options for blackberry control are 1 oz. per acre of Escort XP, 3 to 4 pt. per acre of Surmount, 4 pt. per acre of PastureGard, and 3.3 oz. per acre of Chaparral.

Another treatment that is good on most woody plants is 2 pt. of 2-4D + 1 pt. Tordon 22K + 1 pt Remedy Ultra. Higher spray volumes have been found to generally enhance control.

If controlling by air is an option, then it will require at least 4 gallons per acre of spray solution. However, if your pasture is close to water then Surmount and Tordon 22K are not good recommendations in this instance.

One last option for blackberry control would be to spray the blackberries when they are in bloom to halt berry production and then burn the following year to remove dead canes.

I realize that blackberries have been tough to control, so hopefully if you have tried one of these options already, then I have provided additional treatment plans to try in the future. Both Old World Bluestem and Wild Blackberries have become more prevalent and tougher to control over time. With that said, please contact Katelyn Brockus with any questions that you might have as well as please do a follow up on what has and has not worked on controlling these species.



Old World Bluestem

Not only has Old World Bluestem been an ongoing battle, but wild blackberries have also been prevalent in the district. While we think of blackberries as being a tasty treat, they can be very difficult to kill and can overtake a pasture rather quickly. Once again, this is a process that takes time to treat and is very difficult to control.

A prescribed burn will not kill the blackberry stand. Burning





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MANAGING TURF IN SHADE

Are you having a problem getting your turfgrass to grow in shaded areas of your yard? Turfgrasses differ in their capacity to grow in the shade. Among Kansas turfgrasses, tall fescue is the best adapted to shade. Fine fescues have better shade tolerance, but they lack heat tolerance and typically decline during hot Kansas summers. The warm-season grasses have the poorest shade tolerance, although Zoysia does do better than Bermuda or Buffalograss.

Where there is too much shade for fescue, there are a couple of options you can try to increase grass growth. The most obvious is to either remove the trees or prune limbs to thin out the tree canopies. Pruning limbs and thinning canopies will allow more sunlight to reach the turfgrass. If possible, raise the mowing height in the shade to compensate for the upright growth of the leaves, and increasing the leaf's surface area for photosynthesis.

Remember, the problem is a lack of light, not lack of fertility. So adding extra fertilizer won't help your grass grow better, it could actually be harming it. Too much nitrogen in the spring will cause the plant to grow faster and may result in weak plants. The nitrogen rate for shaded grass should be cut back to at least half the amount you put on grass in full sun. Late fall fertilization after tree leaves have fallen, on the other hand, is important for shaded cool-season turfgrasses and should be applied at a full rate. Irrigate infrequently but deeply. Light, frequent irrigation may encourage tree feederroots to stay near the surface, which increases competition between the trees and the turf.

Many times, the best choice for shaded areas is switch from a turfgrass to more shade-tolerant plant. For example, English ivy and periwinkle (Vinca minor) are much more shade tolerant than any turfgrass adapted to our area. Another option is to simply mulch the area where turf doesn't grow well. The trees will love the cool, moist soil and the absence of competition.

PRUNING RASPBERRIES AND BLACKBERRIES

Now is a great time to start thinking about what needs to be cleaned up or thinned out this spring before everything starts to take off for the growing season. Perennial plants are a great place to start. Most perennials will need to be cleaned up before they start growing. Raspberries and blackberries are an example of perennial plants that need to be cleaned up as spring arrives.

Raspberries and blackberries are perennial plants with biennial canes. This means a single plant will last many years, but an individual cane will only live for two years. In a cane's first year it will grow, but won't produce any fruit. The second year it will produce fruit and then the cane will die. You can removed the dead canes after they have finished fruiting, but many gardeners choose to leave the dead canes until March. Dead canes are not difficult to identify. They are much lighter in color than live canes. The dead canes will also be dry and brittle. These canes should be removed and discarded.

Black and purple raspberries and thornless blackberries tend to grow in a clump. You should remove all the canes expect 5 to 7 of the largest and healthiest in each clump. You want to remove the smaller canes so the plant will focus more on production of the fruit rather than growing those canes bigger. By reducing the number of canes on your plants, you are allowing your plants to focus on production.



TEN TIPS FOR PLANTING NEW TREES

Our world is starting to green up. Isn't it refreshing! Spring always gets me thinking about landscaping. Trees and shrubs are starting to leaf out and soon will be full of color. I'm sure some of you are thinking, "wow I need to plant some new trees", well you are in luck, I have some helpful tips for you on planting your trees correctly.

First, you want to make sure you have the right tree for your site. To avoid problems be sure to choose trees that are adapted to our location. Consider whether the tree produces nuisance fruit or if there are disease-resistant varieties available. For an example, there are a number of crabapple varieties that are resistant to apple scab and rust diseases. Also be sure to consider what the mature size of your tree will be. You want to make sure your tree has enough room to grow to its full size.

Second, be sure to keep the tree watered and in a shady location until you are ready to plant. Keeping the tree wet, and in a cool shady location will keep the tree from getting too stressed out and will make the transplant transition easier. When you are moving the tree, lift it by the root ball or pot. Don't lift the tree by the trunk because you could damage the trunk or the top of the root ball.

Third, before you plant your tree, be sure to remove all wires, labels, cords or anything else tied to the tree. If left on, they could eventually girdle the branch, and kill that section of your tree.

Fourth, you need to make sure you have dug a proper hole. Make sure the hole is deep enough so that the tree sits slightly above nursery level. Make sure the root flare of the tree (point where trunk and root meet) is visible when you plant the tree in the ground. If the root flare isn't visible, remove any excess soil from the bottom of the hole. If the root flare still isn't visible, then you need to dig a bigger hole. When you get the tree into its hole, be sure the tree is sitting on solid ground, not fill dirt. So in other words, don't dig the hole too deep and then add soil back into the hole before placing the tree in the hole. You want the tree to be sitting on a solid

base so it doesn't move after you have it exactly the way you want it. The width of the planting hole is also very important. The hole should be three times the width of the root ball, and deep enough to make the root flare be at ground level.

Fifth, remove all containers from the root ball. Cut away plastic and peat pots; roll burlap and wire baskets back into the hole, cutting as much of the excess away as possible. If you can remove the wire basket completely without disturbing the root ball, do it. If the roots have started to circle around in the container, cut them and spread them out so they don't continue to grow in a circle inside the hole. You want the roots to grow outward from the trunk to make a good support system for years to come.

Sixth, you want to be sure you backfill the hole with the same soil that was removed from the hole. Soil amendments such as peat moss likely do more harm than good, and there is no need to fertilize at planting. Make sure the soil that you are adding back into the hole is loose, with no clods or clumps. Add water to the hole as you fill the soil back in to insure good root to soil contact and to prevent air pockets.

Seventh, after you have the tree planted, don't cut back the branches of the tree, except those that are rubbing against each other or ones that are damaged. The leaf buds release a hormone that encourages root growth. Therefore, if the tree is cut back then there is a reduced number of leaf buds, which results in less hormones released and therefore fewer roots are being formed.

Eighth, you want to water the tree thoroughly right after you have planted it, and then once a week for the first season if

there is insufficient amount of rain. Newly planted trees take more water than most people realize, so if it hasn't rained a couple of inches total in few weeks, you need to water your new tree.

Ninth, you need to mulch around the tree. Mulch should be two to four inches deep and cover an



area two to three times the diameter of the root ball. Mulching reduces competition from other plants, conserves moisture and keeps the soil temperature cooler. When mulching be sure you don't have a mulch volcano around the trunk of the tree. You want the area around the tree to be mulch, but not directly touching the base of the tree.

Lastly, only stake a tree if it is necessary. Tress will establish more quickly and grow faster if they are not staked. However, larger trees or ones in windy locations may need to be staked the first year. Movement is necessary for the trunk to become strong. If you do decide your tree needs to be staked, it should be designed to limit movement of the root ball rather than immobilizing the trunk of the tree.

Those are ten tips that I have for planting new trees into your landscape. Trees not only add character to your yard, but they also add color and shade. If you are looking at your landscape this spring and thinking it needs something new, plant a tree!

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PRESENTS... CHEF ALLI

April 27th at 7:00PM Concordia CTI 1441 Union Road Concordia, KS RSVP to Washington Extension Office 785-325-2121

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Chef Alli will be sharing her agriculture story and how to better advocate for the industry.



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Night Out!

River Valley District



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RIVER VALLEY DISTRICT "2017 UP-COMING MEETINGS & EVENTS"

DATE	TIME	PROGRAM	LOCATION
Mar. 19-May 13		Walk Kansas	Statewide Program
Mar. 29-May19	9-10am	Strength Training (Wednesday & Friday mornings)	Cuba-Cuba City Hall
April 3	6:30pm	Literacy in the Early Childhood Classroom	Concordia-Courthouse Meeting Room
April 4	2pm	Keys to Embracing Aging	Concordia-Courthouse Meeting Room
April 11	2pm	Keys to Embracing Aging	Belleville-Public Library-Extension Spring Tea
April 13	10am	Keys to Embracing Aging	Washington-Extension Office Meeting Room
April 27	7pm	Ladies Night Out-Presents Chef Alli	Concordia- CTI, 1441 Union Road
May 7	2pm	Master Gardner Spring Field Day	Clay Center-Utility Park
May 13	8:30-4:30pm	Tractor and Machinery Safety Training	Concordia-CTI, 1441 Union Road
June 20-23		Kansas Range Youth Camp	Murdock, KS-Camp Mennoscah, Kingman County

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