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Carnival Lights & Country Nights
Northwest Kansas District Free Fair, Inc.
July 30-August 6th
Goodland, Ks
4-H & Open Class registration opens on June 13, 2022
All 4-H entries are due Wednesday, July 13, 2022,
by 5:00 PM MST

2022 CHEYENNE COUNTY FAIR
County Strong and Carrying On!

Wallace County Fair
“4-H Empowers You”
July 23-30, 2022
4-H entries due to office by July 8th

August 3-6
St. Francis, Kansas

K-State Research and Extension is an equal opportunity provider and employer.
Palmer Amaranth Control in Grain Sorghum

Pre-emergence herbicides are critical for successful weed management in grain sorghum, especially for difficult to control species like Palmer amaranth. However, difficult weather conditions this spring resulted in poorer than expected weed control from pre-emergence herbicides in some locations in Kansas (Figure 1). This situation has resulted in questions asking how to control rapidly-growing Palmer amaranth in grain sorghum fields.

Unfortunately, post-emergence herbicide options in grain sorghum are limited. All of the available options are most effective when small (under 4 inches tall) weeds are targeted. This article will review the pros and cons of key post-emergence herbicides that control Palmer amaranth in grain sorghum. Combinations of the herbicides listed here will generally improve control.

**Atrazine** can control sensitive populations of Palmer amaranth and can be combined with other herbicides to enhance effectiveness. Recommended rates range from 0.25 to 2.0 pounds of atrazine (0.5 to 4 pints). Atrazine should be applied with crop oil or surfactant to control emerged weeds. Atrazine can be applied to grain sorghum between 3-leaf and 12 inches or between 6 and 12 inches in western Kansas.

**Aim** (carfentrazone) is a Group 14 herbicide that can be applied to grain sorghum between 4 inches and boot stage. It is less effective than some of the other herbicides in this article and requires good coverage for maximum effectiveness. Aim can be tank-mixed with atrazine, 2,4-D, dicamba, bromoxynil, and Huskie. Aim is likely to burn grain sorghum leaves, especially if applied in very hot, humid weather or if applied with crop oil. Leaf burn will also be greater if Aim is applied with bromoxynil.

**2,4-D** is an effective herbicide option to control Palmer amaranth. However, crop response should be expected, especially if applied in hot, humid conditions. Crop responses can include rolled leaves, lodging, and brittle stems. Grain sorghum is most tolerant of 2,4-D applications when it is 5 to 10 inches tall. Drop nozzles should be used when applying 2,4-D to grain sorghum greater than 8 inches. To reduce crop response, apply lower rates (2/3 pint) with atrazine, Aim, bromoxynil, or Huskie. Using crop oil in tank mixes with 2,4-D will increase crop injury.

**Dicamba**, at the rates used in grain sorghum (0.5 pint), may be less effective on Palmer amaranth than 2,4-D. It can be applied to grain sorghum between 2 and 15 inches. Drop nozzles should be used if grain sorghum is 8 inches or taller to avoid damaging seed heads. Crop response, including rolled leaves and lodging should be expected, especially if applied in hot, humid conditions. Dicamba can be tank-mixed with Aim, atrazine, and bromoxynil.

**Bromoxynil** can be applied from the 3-leaf stage through boot stage. Crop response will be less with bromoxynil than other herbicides, but bromoxynil alone will not control Palmer amaranth larger than 4-leaf. Adequate spray coverage is needed for maximum effectiveness.

**Huskie** (pyrasulfotole+bromoxynil) is most effective when mixed with atrazine (up to 1 pound). When used alone, it can be applied between 3-leaf and 30 inches and should be applied with HSOC (high surfactant oil concentrate) or AMS + NIS. Huskie will cause leaf burn, which can be greater in fields where mesotrione was applied pre-emergence. Huskie plus atrazine may be tank-mixed with phenoxy broadleaf herbicides such as 2,4-D or dicamba as needed.

Additional information can be found in the *2022 Chemical Weed Control for Field Crops, Pastures, Range- land, and Noncropland*, K-State publication SRP-1169. The use of trade names is for clarity to readers and does not imply endorsement of a particular product, nor does exclusion imply non-approval. Always consult the herbicide label for the most current use requirements.
Managing Feed Costs this Fall

After limited forage and many producers depleting stored feed, some may be going into fall with concerns about affording cattle feed expenses. There are a few management strategies to reduce feed costs, maximize the available feed resources, and boost animal efficiency to stretch feed as far as possible. These tactics include, but are not limited to considering alternative feed ingredients, minimizing feed shrink/loss, analyzing rations or ingredients on hand, and implementing a ration formulation program.

While we must consider opportunity cost, on-farm commodities are generally more cost effective than feed purchased off farm. Through increasing the inclusion in the ration of commodities produced on the farm (i.e. straw) may reduce the feeding costs. However, cattle managers should always consider the impacts of any changes on the animal performance. If it costs more in decreased cattle performance than is saved in utilizing these on-farm commodities, then this strategy is not cost effective.

Producers may also consider alternative feed ingredients. High protein feed ingredients like distiller’s grains, soybean hulls, and corn gluten meal can be a cost-effective substitute for a commercial protein product. Taking advantage of alternative feed sources can often reduce cost of feed per head. However, new sources of feed should be tested to determine nutritional value that can then be used to formulate a balanced ration. Furthermore, many of these products may have a shorter shelf life and be more inconsistent than a commercial product. However, in many cases utilizing these alternative sources may be worth the extra work with the savings that result.

Care should also be taken to limit commodity shrink or loss from feed waste and the environment. The methods of storage and feeding can significantly impact the amount of feed loss. For example, losses through poor storage and feeding methods have been reported at more than 30% for some beef cattle herds (Gunn & Schwab, 2016). These losses may occur when silage piles are left untarped, baled hay is left unstacked and outside, and when ingredients like ground hay are blown away. These losses stress the importance of proper storage. If a producer manages 200 head of 1400 lb cows that are fed hay for six months of the year, they will feed approximately 710 tons of hay. At $160/ton, if hay loss/waste was reduced by only 5% there is a savings value of over $5500 that year alone. While the reduction of loss may amount to more than 5%, this example alone results in a savings of $55,000 over 10 years assuming everything stays constant. These savings may encourage a hay shed that will shelter some hay and feed ingredients from the elements. Similarly, the reduction of feed loss may prove far more valuable than the cost of tarping a silage pile. When feed is short, these small steps may extend the resources to get cattle through the fall and winter.

Much like storage methods, how the feed is put up and fed can play a role in waste. Timing is something that should be kept at the forefront when harvesting and putting up hay during the summer as it can affect hay quality and nutritional value. As for feeding, a TMR (total mixed ration) can help reduce sorting and wasting. When given the choice cattle will sort out the best feed, grinding and mixing feedstuffs significantly reduces their ability to do so. Furthermore a TMR allows for specific formulations that ensure a nutrient balanced ration in every bite.

When feed resources are limited, efficiency is key. Beyond extending available feeds and considering alternatives, thinking on the animal side of things can prove to be a useful strategy. Take advantage of calf implants, ionophores, and feeding strategies such as limit feeding to improve feed conversion when possible. Along these lines, more efficient cattle can be selected thus resulting in genetic improvement in the herd. There are published EPDs to help producers select parent animals that are genetically predisposed to reduce feed intake without sacrificing animal performance. If feed efficiency is something of high importance to a producer, related EPDs should be considered during sire selection or bull purchases.

Finally, consulting with a nutritionist or other professionals and having feed rations tested can help ensure livestock nutritional requirements are being met and rations are cost effective. Understanding the actual values of the feed ingredients instead of relying on average values can aid in meeting and not exceeding nutritional requirements if possible. If unsure where to start, contact your local extension office. There you will have access to feed sampling equipment, feed testing and ration formulation programs.

The take away message is that careful management can reduce feed loss, optimize animal performance, maximize ration. We cannot improve what we cannot measure. Paying closer attention and recording animal performance, being open minded to alternatives, and being aware of feeding costs and animal requirements can all cut costs and boost efficiency of the operation.

For more information on feeding in the fall, please visit or call the Cheyenne County Extension Office at (785)332-3171.

For more resources and event announcements, please follow us on Facebook at K-State Research and Extension Sunflower District.
Recommendations to preserve food at home are based on science. This process is not the place to be creative and make up your own recipes. Doing this can lead to foodborne illness. While the practice of preserving food has existed for thousands of years, the methods have evolved to keep up with today’s food safety issues.

**Do not use any recommendations for home canning that are older than 1994. Significant changes were made by the U.S. Department of Agriculture at that time to keep canned foods safe.**

Canning can be a safe and economical way to preserve quality food at home. Disregarding the value of your labor, canning homegrown food may save you half the cost of buying commercially canned food. Canning favorite and special products to be enjoyed by family and friends is a fulfilling experience and a source of pride for many people.

Many vegetables begin losing some of their vitamins when harvested. Nearly half the vitamins may be lost within a few days unless the fresh produce is cooled or preserved. Within 1 to 2 weeks, even refrigerated produce loses half or more of some of its vitamins. The heating process during canning destroys from one-third to one-half of vitamins A and C, thiamin, and riboflavin. Once canned, additional losses of these sensitive vitamins are from 5-20 percent each year. The amounts of other vitamins, however, are only slightly lower in canned compared with fresh food. If vegetables are handled properly and canned promptly after harvest, they can be more nutritious than fresh produce sold in local stores.

The advantages of home canning are lost when you start with poor quality fresh foods; when jars fail to seal properly; when food spoils; and when flavors, texture, color, and nutrients deteriorate during prolonged storage.

**Ensuring safe canned foods**

Growth of the bacterium *Clostridium botulinum* in canned food may cause botulism — a deadly form of food poisoning. These bacteria exist either as spores or as vegetative cells. The spores, which are comparable to plant seeds, can survive harmlessly in soil and water for many years. When ideal conditions exist for growth, the spores produce vegetative cells which multiply rapidly and may produce a deadly toxin within 3 to 4 days of growth in an environment consisting of:

* a moist, low-acid food
* a temperature between 40° and 120°F
* less than 2 percent oxygen.

Botulinum spores are on most fresh food surfaces. Because they grow only in the absence of air, they are harmless on fresh foods.

Most bacteria, yeasts, and molds are difficult to remove from food surfaces. Washing fresh food reduces their numbers only slightly. Peeling root crops, underground stem crops, and tomatoes reduces their numbers greatly. Blanching also helps, but the vital controls are the method of canning and making sure the recommended research-based process times are used. Properly sterilized canned food will be free of spoilage if lids seal and jars are stored below 95°F.

**Come join me on Friday, July 8, at the CAB in Sharon Springs to learn more about canning produce safely. Call the office at 785-852-4285 for information.**

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*K-State Research and Extension is an equal opportunity provider and employer.*
When 4-H members make and take their projects to the fair, they are practicing skills ...
Cheyenne County Fair Pre Entry is **Due July 13th**. Watch your mail for information regarding Fair entry.

**July 26th** will be the clean up and set up for the Fair starting at 6 pm. Please come and help get ready for the Fair, there will be a job for everyone.

**Attention New Rule**-
All 4-H and FFA Exhibitors must attend Pre-Fair Cleanup, work at least one shift in the 4-H Council Food Stand and Post-Fair Cleanup. Failure to participate in Pre-Fair Cleanup and work one shift in the 4-H Council Food Stand, will disqualify any previously eligible Exhibitors from participating in BOTH the Static and/or Premium Sale. Failure to participate in the Post-Fair Cleanup will disqualify any previously eligible Exhibitors from participating in the following years County Fair Static or Premium Sale.

**Online Resources**-
http://www.cheyenneksfair.com
http://www.sunflower.k-state.edu
**On Facebook**- Sunflower Extension District Cheyenne County 4-H
**Phone**- 785-332-3171
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- **4th of July**
- District Horse Show
- Livestock Learning Day
- Fair Entry Deadline
- KSF Livestock Entry Deadline
- Fair Clean Up/ Set Up 6pm
- Visual Arts Judging
- Fair Archery Contest 9am
- Fair Shotgun Contest 3pm
Important Dates

July 4 .................. Extension Office Closed/ Happy Fourth
July 9 .................. Livestock Learning Day/St. Francis
July 13 ............... Fair Entries Due
July 13 ............... Style Revue Scripts Due
July 16 ............... Cloverbuds
July 17 ............... Sunflower
July 23 ............... Dog Show
July 25 ............... Pet Judging
July 25 ............... Poultry Testing
July 26 ............... Fashion Revue Judging
July 26 ............... Fashion Public Style Revue
July 28 ............... Fairground Clean-up
July 29 ............... Horse Show
July 30 ............... Fair Parade
Aug 2-5 .............. Fair
Aug 4 ............... State Fair Sign up - Fair Office
Aug 4 ............... Grand Champion Jacket - Verification

Country Clovers, Ruleton Eager Beavers, & Prairie Dale
Meetings TBA

The Summer has kicked off to a great start for the Sunflower Extension District #6, Summer Day Camp Activities.

Little Camp on the Prairie, Gardening, Fishing Clinic, Aerospace Camp

Don’t Forget!
4-H Fair Entries & 4-H Style Revue Scripts are due July 13, 2022, by 5:00 PM MST.

The 2022 NWKS District Free Fair is open for entries on June 13, 2022, for the public and 4-H.

KS State Fair 2022
Pre-Fair Entries
4-H Horse Entries
Postmarked by: August 1, 2022

https://nwksfair.fairentry.com/Fair/SignIn/17358

Like us on Facebook

https://www.facebook.com/sunflowerextensiondistrictshermancounty4h/
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**Sherman July 2022**

- **Extension Closed**  
  - **Happy 4th of July**
- **Fair Entries Due**  
  - By 5:00 PM
- **Livestock Learning Day**  
  - St. Francis
- **Cloverbuds**  
  - 10:00 AM
- **Sunflower**  
  - 3:00 PM
  - 4-H Building
- **Dog Show**  
  - 8:00 AM
  - Ag Building
- **Pet Judging**  
  - Poultry Testing
  - 4:00 PM MT
  - Goodland
- **Fashion Revue**  
  - Judging & Fashion Public Style Revue
- **Fair Clean-up**  
  - 8:00 AM MT
- **Horse Show**  
  - 8:00 AM MT
- **Fair Parade**  
  - Line-up  
  - 5:00 PM MT  
  - Parade Begins

**Sherman July 2022**
**Dates to Remember**

July
4– Office Closed
8– Fair Entry Forms due
9– Livestock Learning Day—St Francis
22- Fair clean up
23– Fair Horse Show
25-30- FAIR WEEK

Wallace County Fair entry forms are due no later then July 8th. This helps us to make schedules.

**GET YOUR FAIRBOOK!**

Fair books are ready. They may be picked up at the Extension Office or local businesses around town.

**4-H Club Fair Responsibilities**

Weskan Windmills-County Fair Horse Show
Smoky valley- Snack Shack, Set-up, Clean-up
Harrison Endeavors- 4-H Style Revue, Set-up, decorate, snacks & drinks, Clean-up

**DON’T forget!!**

4-H Fairgrounds Clean Up will be held Friday, July 22.

**Attention 4-Hers:**
Stop by the Extension Office to pick up photo-boards, food & nutrition stickers, clothing tags for Fair exhibits.

**Wallace County Fair Theme**

Wallace County Fair
“4-H Empowers You”

***Reminder***

Wednesday, July 27, 2022

Animals all need to be in place by 9:00 a.m.

Weigh-In order:
Steers, Swine, Sheep, Goats

Small animals will be inspected prior to unloading. Livestock pictures will be Wednesday 2-4 p.m.

Beef Show Friday July 29 @ 9:00 a.m. is a Blow & Go Show
(If you need the rules for this please get ahold of the Extension Office)

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**FAIR WEEK**

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