December 2019

Inside Your Newsletter...

Identify and Eliminate “Gremlins” From Yield Monitor Data...........Crop Production page
Ensuring Cows Receive Adequate Nutrients While Grazing Corn Stalks...Livestock page
The Family Table...............................................................Family & Consumer page
Why 4-H?.................................................................4-H Youth Development page

Events Coming up in our District:

Stay Strong, Stay Healthy
Starting December 2—Ending January 22
First Christian Church in Goodland, KS
10:00 am—11:00 am MT
The sessions will be 2 days a week for 8 weeks.
Call the Sunflower Extension Office to get more information:
785-852-4285 or 785-890-4880

K-State Crop Pest Management School
December 3
Elks Lodge in Goodland, KS
8:00 am – 5:00 pm MT
Topics to be discussed: Palmeramaranth, Stalks/Ear Rots, Bacterial Streak, Goss’s Wilt, Bt Technology, Spidermites and an update on application technology

Cost: $35 (if registered by Nov 26)
After Nov 26, cost is $40
Lunch and handouts will be provided.
Online Registration & Flyer: www.sunflower.ksu.edu/agronomy
K-State Experiment Station: (785) 462-6281
Email: jfalkjones@k-state.edu
Identify and Eliminate "Gremlins" From Yield Monitor Data

The following article is written by RL (Bob) Nielsen, Extension Corn Specialist at Purdue University. (rnielsen@purdue.edu)

I was looking for information on start and stop delays and how they show up on yield maps, when I found this article. I thought it would be of interest to folks, while looking through yield data.

Even if grain yield monitor calibration, adjustments, and operation are faithfully conducted (Luck & Fulton, 2014), the resulting yield data sets almost always require some post-harvest processing and "cleaning" procedures to rid the data set of anomalies and "gremlins" (Luck et al., 2015). Failure to do so does not result in catastrophe, but contributes to errors in subsequent spatial analysis and interpretation of the data. Farmers can conduct these harvest data processing and "cleaning" procedures themselves with commercially available mapping software or outsource the tasks to a service provider.

Doing it yourself requires the software (an expense) and the knowledge to operate the software (time and talent). Commercially available mapping software programs vary in their processing and "cleaning" capabilities, flexibilities, and user-friendliness. Consequently, "doing it yourself" can be a rewarding challenge or a frustrating task.

Outsourcing the task involves some expense (up front or hidden in other service fees) and trust that the service provider knows what they are doing. Automatic, wireless uploads of yield data directly from the combine to a "cloud-based" service does not always include assurance that the yield data will be further processed or "cleaned". Data may simply be stored and/or added to a larger aggregation of "big data" with no further processing or "cleaning".

Common post-harvest data processing steps include choosing correct settings for "dry" bushel moisture value, "dry" bushel weight, stop / start time delays (affect estimated total harvest area), grain flow lag (time from header to sensor, affects positional accuracy of point data), and GPS offsets (distance from GPS antenna to header, affects positional accuracy of point data). These various settings influence the accuracy of the estimates of "dry" bushels per acre and the spatial accuracy of the yield data points with respect to their geo-location within the field. When yield data are properly processed, patterns of spatial yield variability are often more clearly identified (Fig. 1 before processing vs. Fig. 2 after processing).

Some yield monitors (particularly newer models) allow these settings to be made in the monitor display prior to harvest. Others do not and so the yield data requires using mapping software to retroactively set the values and "reprocess" the data. Not all mapping software programs provide the same options for reprocessing of yield data. Not every proprietary yield file format lends itself to reprocessing.

Other anomalies and "gremlins" in yield data may literally be inaccurate point yield estimates caused by inadvertent quirks of the yield monitor system (e.g., sudden speed changes, incorrect auto-swatth widths, imprecise DGPS signals, and the normal grain flow dynamics inside the combine). Yield data attributes like swath width, harvest speed, and DGPS signal quality can be displayed by your mapping program just like you do for yield itself. Mapping these attributes helps you more clearly visualize the location and extent of the anomalies.

Some "gremlins", like incorrect swath widths, can be corrected during the reprocessing steps of the mapping software so that bushels per acre are recalculated accurately (Nielsen, 2014b). Other anomalies that do not directly impact yield estimates, such as incorrect assignment of hybrid labels to the yield data (Nielsen, 2014a), can be corrected with your mapping software by editing the yield file, manually selecting groups of yield data points, and replacing the hybrid label with the correct ones. True anomalies and "gremlins" (e.g., data points associated with sudden speed changes, inadvertent "header down" data points) should simply be deleted from the data set to avoid interference.

Fig. 1. Map of yield data incorrectly processed for start/stop delays and grain flow shift.
Colors: Green = highest yields, Red = lowest yields. Davis-Purdue Ag Center, Field M1 (30-ac), 2015 corn harvest.

Fig. 2. Map of yield data correctly processed for start/stop delays and grain flow shift.
Colors: Green = highest yields, Red = lowest yields. Davis-Purdue Ag Center, Field M1 (30-ac), 2015 corn harvest.

References (Great information in these publications):


Livestock  By: Heather Foxworthy

Ensuring Cows Receive Adequate Nutrients While Grazing Corn Stalks

In areas where corn and livestock production are major industries, it is commonplace to graze cattle on corn stalks. While grazing this feed source is generally cheap and good quality for supporting cattle through several months in the fall or winter, there may be a need for supplementing the diet with various nutrients.

Providing minerals and vitamins is essential for reproduction and gestation, this argues the importance of implementing a program to bred cows on stalks. Providing free-choice salt, phosphorus, calcium, and vitamin A is recommended for all cattle grazing dormant winter rangeland or crop residues.

There are several factors to consider when evaluating if the protein and energy requirements are being met by cattle utilizing crop residue as a feed source. Assessing the quantity and quality of the feed source is vital to understanding the nutrients that it can provide to animals grazing it. As cattle are turned out, they will select and focus on consuming grains and then move on to less palatable feed like the leaves and husks. Due to this selective grazing behavior, the quality and availability of the forage will decrease over time, unless a more intensive grazing management style is used such as strip grazing allowing for a more uniform utilization. Once the grain has been consumed, the protein and energy available falls on the border of meeting those requirements. As a general rule of thumb, when corn is no longer visible in the manure, protein needs to be supplemented.

Assessing the body condition and age of cattle grazing the crop residue will also influence what should be supplemented to the group. For example, the nutrient requirements of spring calving cows in optimum body condition with a score of 5 will differ from bred two year olds. A study by the University of Nebraska suggests that it is more important to supplement the well-conditioned cow herd with mineral and salt rather than protein in energy in ideal conditions only. However, the younger females grazing that are still growing such as bred two year olds will need to be supplemented to meet their higher requirements for both protein and energy. In addition to the needs of growing cattle, cows due to calve March 1\textsuperscript{st} start their third trimester in late November, a milestone that marks a significant increase in nutrient requirements. This combined with the decrease in forage quality seen over time further suggests implementing a sound supplementation program.

In addition to selective grazing, weather during the fall and winter can change the quality of crop residues and therefore should be considered when making supplementation decisions. If weather is typically cool and dry, the forage will retain much of its quality for a longer period of time. Alternatively, during a wet season the forage quality will quickly decline further encouraging producers to compensate for the deficit of nutrients through supplementation. When considering energy, cattle weathering wind, snow and freezing temperatures without available wind-breaks paired with snow cover making grazing more difficult will require more energy to maintain their condition.

Once all factors have been considered and it has been determined that there is a protein need, a producer must decide in what form it will be provided. Generally natural protein sources provide a better response than protein sources with non-protein nitrogen such as urea. A study by Kansas State University investigated weight gain of three year old cows grazing corn stalks from mid-November to the 1st of February when they were provided either 0.4 pounds per day of soybean meal or 7.2% of a urea supplement. Results revealed a 0.99 average daily gain of those supplied the natural protein source of soybean meal in comparison to those provided the urea protein supplement which on average gained 0.76 pounds per day. This suggests that providing a natural protein source when husks and leaves are the primary forage available will provide the most benefit to grazing cows in terms of increasing body condition. A natural protein source can be provided in the form of a good quality Alfalfa hay or a concentrated natural protein supplement that contains soybean or cottonseed.

Cattle not being supplemented will likely perform without many detrimental effects, however to meet their potential supplementation is recommended to fill any shortfalls in what the feed source provides.

For more information or resources regarding corn stalks please visit or call the Cheyenne County Extension Office (785)332-3171.
Family & Consumer Science  By: Melinda Daily

What is this Family Doing? Yes, eating a meal together and having fun!

For most families, it’s a struggle to balance work, school, and activities, making it a challenge to gather together for a meal. Finding a way to make regular family meals happen has a positive effect on both the nutrition and emotional well-being of the whole family.

Why are family meals so important?

- Families make better food choices when food is eaten together.
- Young children are more likely to try new foods.
- Teens are less likely to engage in risky behaviors such as alcohol, tobacco, illegal drugs, or sex and have fewer behavioral issues, when time is spent together as a family.

How do you make the most out of your family meals?

- Choose a time that works for everyone. The meal doesn’t have to be dinner - breakfast works too! While there is no magic number of family meals, the benefits become evident at three or more per week.
- Unplug your meals. Put your phone away, turn off the TV, and set aside games and toys. Enjoy the company of your family and find out what’s been going on in their lives.
- Mealtimes should be a time for families to relax and reconnect. Keep the conversation upbeat and happy. Don’t battle over foods not eaten. Save serious conversations for another time. When family meals are pleasant, kids do their best job of eating well.

- If you don’t know what to talk about, try some of these questions to get the conversation flowing:
  
  - How was your day?
  - What was one way you helped another person today?
  - What was the best thing about your day today?
  - What is one thing you couldn’t live without and why?

Ask your kids for help cooking and setting the table. They will take pride in their efforts and learn important cooking skills. They may even be more willing to taste new foods.

Depending on age and ability, kids can help with many things including:

- Drain and rinse canned vegetables, fruit and beans.
- They can wash and cut fruits and vegetables.
- Measuring and pouring ingredients could be a task they could complete. Stirring food or batter in a pot is also an easy task.
- Let them try cracking an egg.

All of these tasks can be very helpful in learning how meals are prepared.

Let your family help plan the meals. This will also make family time more fun and enjoyable.

Enjoy the Holidays! Include your whole family in the preparations.

---

K-State Research and Extension is an equal opportunity provider and employer.
Our kids have so many things going on! Why 4-H?

Q. How do we know that a positive youth development program like 4-H makes a difference in the lives of youth, families and communities?
A. The 4-H youth development program assists young people by creating environments that meet their needs and provides opportunities for them to master the competencies that prepare them for successful adulthood.

Q. Why are out-of-school, non-formal educational opportunities like 4-H important to young people?
A. They encourage:
- Personal choice, helping youth develop decision-making skills.
- Multiple leadership roles and trying new things.
- Hands-on learning, a hallmark of the 4-H program.
- The development of peer relationships outside the classroom.
- Access to multiple adult caring adults and adult role models.
- Participation in a collection of diverse activities allowing youth to develop a variety of relationships and skills.

Q. Why is participation in a variety of out-of-school activities important for youth?
A. Involvement in multiple and diverse activities fosters academic achievement and motivation, and a healthy sense of self. A long time characteristic for 4-H has been that it offers many different kinds of activities in which youth can become involved. The emerging research on extracurricular involvement indicates that these activities play a beneficial role in adolescent development. Therefore, rather than being viewed as “extra,” these should be viewed as essential-curricular activities” (Russell, 2001).

What can club members and leaders do to help make 4-H the best experience possible?

Research shows that members are encouraged by project based learning, parent involvement, feeling connected to other 4-H members in their club, knowing what they are supposed to do, clear communication about opportunities (club and project meetings) available to them, feeling welcome in a club setting, and when they are having FUN!

- Have a welcome team who will greet each person with a smile!
- Create a club or county 4-H calendar so families know what is going on; be sure to include fun and celebration.
- Encourage project work. Encourage families to find resources to complete their projects outside the 4-H program if necessary.
- Encourage engagement of members and parents. Find something for each person to do to contribute to your club.
- Describe events; not everyone knows what happens at each function. They may not know they are welcome to participate.
- Pair new members/families with an experienced family; these 4-H Friends can help new members and parents understand what is happening during the meeting, help new members participate in the meeting, and provide a safe person for them to ask questions. Consider calling or e-mailing them to check in before the next meeting.

For more information about 4-H in the Sunflower District contact:
Karen Nelson
karennelson@ksu.edu
785.890.4880

K-State Research and Extension is an equal opportunity provider and employer.
The Cheyenne County Extension Office wishes everyone a Merry Christmas and Happy New Year!

The Lawn Ridge 4-H Club would like to challenge all clubs again this year to a gingerbread house contest! The top 3 winners in each age range will be awarded prizes! We understand that December is busy, but encourage you to try to do these together as a club. We are adding a new age group this year, ages 0-7, so the little ones can participate next to their siblings. The houses will be judged by the public at the home basketball game on December 17th. Please, bring them to the high school cafeteria by 5:30 PM on December 17th. You will see a Lawn Ridge 4-H Club member at the display table. Take your houses to them. If can’t drop them off email Kattie at ktaldaco@gamil.com to make arrangement about dropping the houses off at Kattie's classroom.

Age groups follow 4-H age:
Categories- Pre 4-H, Junior, Intermediate and Senior
Size and materials do not matter. Please make sure you have age and name clearly visible on the bottom of the board. Encourage your children do build and decorate their our house as much as they can. This is about building their creativity and skills. Good luck! We are excited to see what you all come up with!
<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>4-H Enrollment Deadline</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>First Day of Winter</td>
</tr>
<tr>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Courthouse Closed</td>
<td></td>
<td>Merry Christmas</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>30</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>New Year’s Eve</td>
</tr>
</tbody>
</table>
Important Dates

December 1............ Re-Enrollment Deadline for returning 4-H Members to show in the 4-H Division at the County Fair.
December 2............ JR Leader Meeting
December 3............ Match Day
December 4............ Level II Foods
December 4............ PDC Meeting
December 7............ Genesis Food Drive
December 7............ Sunflower
December 8............ Ruleton Eager Beavers
December 8............ Prairie Dale
December 11.......... Kids A Cookin’
December 24.......... Christmas Eve/Office Closed
December 25.......... Christmas Day/Office Closed
December 31 .......... New Years Eve
January 1............. Happy New Year/Office Closed

Sherman County Match Day, Tuesday, December 3, 2019.

Who to donate to:
- 4-H Council
- Project Support
- Afterschool Programming
- Summer Camping
- 4-H Promotions

Clubs
- Prairie Dale
- Ruleton Eager Beavers
- Sunflower

Project Clubs
- Shooting Sports

Trunk or Treat
JR Leaders win the Best Movie Theme: Peter Rabbit

Sherman County December 2019 Newsletter

2020 Cupcake Showdown

WHEN: February 8, 2020
WHERE: Cheyenne County 4-H Building
TIME: 8:00 AM, MST

The Sunflower District 4-H Clubs invite all youth & adults to participate. Open to all Community Members in the surrounding area!
Register your team by: January 27, 2020
Team Registration Fee: $10.00

https://www.facebook.com/sunflowerextensiondistrictshermancounty4h/
# Sherman 2019

<table>
<thead>
<tr>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2.</td>
<td>3.</td>
<td>4.</td>
<td>5.</td>
<td>6.</td>
<td>7.</td>
</tr>
<tr>
<td>Re-Enrollment Deadline for returning 4-H members to show in the 4-H Division at the county fair</td>
<td>JR Leader Meeting 7:00 PM 4-H Building</td>
<td>Match Day Don't forget! Please look at the newsletter for donation of choice PDC - 5:30 PM 4-H Building</td>
<td>Level II Foods 3:30-5:00 PM 4-H Building</td>
<td></td>
<td></td>
<td>Genesis Food Drive at the Rock House 8:30 AM Sunflower Club meeting following Genesis</td>
</tr>
<tr>
<td>Ruleton Eager Beavers 3:00 PM Prairie Dale 6:00 PM 4-H Building</td>
<td></td>
<td></td>
<td>Kids A Cookin' 3:15-4:45 PM 4-H Building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>16.</td>
<td>17.</td>
<td>18.</td>
<td>19.</td>
<td>20.</td>
<td>21.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>23.</td>
<td>24.</td>
<td>25.</td>
<td>26.</td>
<td>27.</td>
<td>28.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Christmas Eve Extension Office closed</td>
<td>Christmas Day Extension Office closed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>30.</td>
<td>31.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[https://www.facebook.com/sunflowerextensiondistrictshermancounty4h/](https://www.facebook.com/sunflowerextensiondistrictshermancounty4h/)
Record Book Results

Horse -
1. Gage Cox
2. Carter Cox

Leadership -
1. Blakely Aldridge
2. Brennan Aldridge
3. Claire Helsel

Sheep -
1. Blakely Aldridge
2. Gage Cox
3. Carter Cox

Swine -
1. Kasen Stramel
2. Kenli Larson
3. Trell Larson
4. Gage Cox
5. Carter Cox

Overall Book -
Jr.– Addison Aldridge
Int.– Brennan Aldridge
Sr.– Calley Stubbs

Leadership -
Sr.– Blakely Aldridge
Int.– Brennan Aldridge

Livestock -
Jr.– Carter Cox
Int.– Gage Cox
Sr.– Calley Stubbs

Life Skills -
Jr.– Addison Aldridge
Int.– Claire Helsel
Sr.– Regan Stramel

Arts & Crafts -
1. Claire Helsel

Beef -
1. Calley Stubbs
2. Hayden Stubbs
3. Jensen Vandike

Dog
1. Claire Helsel

Foods & Nutrition
1. Addison Aldridge

SpaceTech-
1. Brennan Aldridge

Clothing Buymanship-
1. Regan Stramel

Woodworking-
1. Ayden Aldridge

Record Books
Record books that are going on to regionals, are due in the Extension Office by January 6. Please have them to the Office by 5:00 p.m. Thanks!!

4-H Enrollment
Please enroll online at http://ks.4honline.com as we have started a new 4-H year. Please get on to enroll by December 1st or you will have to pay the enrollment fee of $15 and not be able to show in the 4-H division at the County Fair. If you have any trouble or question please call the extension office. Thanks!!

Dates to Remember

December
Nov 29-Dec 3—National 4-H Congress
1- 4-H Enrollment deadline
2– PDC Mtg—St Francis
4– PDC Mtg—Goodland
5– PDC Mtg—Sharon Springs
9– Extension Board Mtg—Goodland
24– Office Closed
25– Office Closed

January
1—Office closed
6– KAP Books due to office
10– Regional KAP Judging—Hays
13—4-H Council Meeting @ Weskan
15– Extension Board Mtg—Goodland

February
10– Extension Board Mtg
16-17– Citizenship in Action—Topeka

K-State Research and Extension is an equal opportunity provider and employer.
December 2019
Wallace County

<table>
<thead>
<tr>
<th>Sun</th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>8-H Enrollment Deadline</td>
<td>Ext Board Mtg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>16</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Office Closed</td>
<td>Christmas Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Office Closed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>30</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MERRY CHRISTMAS