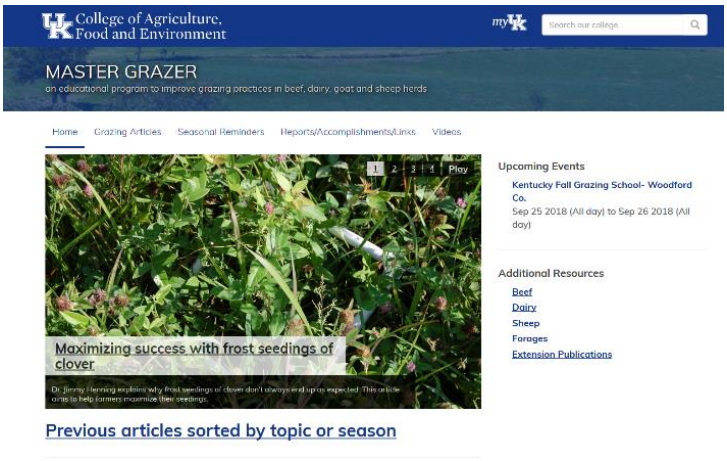
Master Grazer Program
First 4-Month Report 2018

(January- April 2018)

Master Grazer Website and Promotion



The Master Grazer website continues to be the program's source for science-based, timely articles specifically related to grazing programs for all ruminant species. Updates to this site allow the user to locate information on how to incorporate improvements in their grazing practices.

Spring Kentucky Grazing School- Princeton, KY

- On April 24th and 25th, an intensive and hands-on educational program on how to design and implement a rotational grazing system was held at the UK Research and Education Center.
- Twenty-one (21) farmers and industry partners attended this program from Kentucky and neighboring states representing 5,808 acres of farmland of which 1543 acres are grazed by 908 ruminant animals.
- Participants represented 7 western KY counties and 4 participants farm in TN and IN.
- The hands-on component of this program included learning how to assess forage yield, how to calibrate a no-till drill, key components for frost-seeding clover, and grazing results after cattle grazed small paddocks after 18 hours grazing in paddocks constructed by participants.

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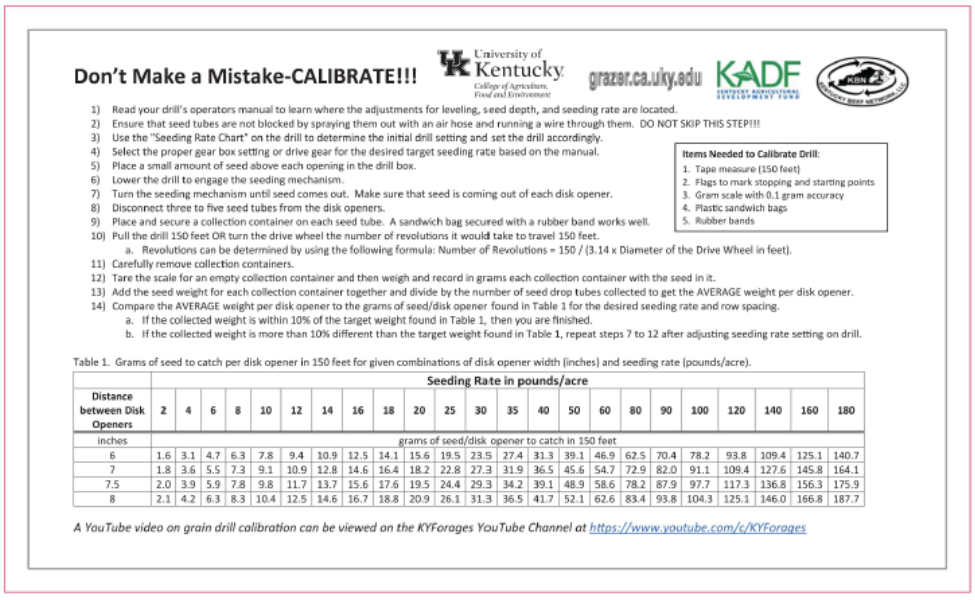
- The majority of participants planned to make changes to their grazing system following completion of the program. 60% or more of the participants plan to make changes to the following:
  (a) Increase number of paddocks grazed by using temporary fencing,
  (b)Decrease hay feeding by extending the grazing season using stockpiles fescue and/or warm season grasses,
  (c) Soil test pasture fields and apply lime and fertilizer as needed,
  (d) Renovate pastures with clover and use certified seed when replanting
  (e) Design grazing paddocks to provide ready access to shade,
  (f) Design watering system to provide ready access to any grazing paddock,
  (g) Manage grazing system to prevent animal health issues.

- Participants were surveyed at the conclusion of the school to assess if they felt like their knowledge base had improved. In all areas covered within this program, the participants reported an increase in knowledge and left feeling like they has a high level of understanding of the topics covered.

Cost Share No-Till Drill Calibration Decals

To further promote correctly using no-till drills for reseeding pastures, Dr. Chris Teutsch has designed a step-wise set of directions on how to calibrate a no-till drill. These directions have been printed on a decal that can be affixed to cost-share drills located throughout the state. Additional decals will be distributed so farmers can attach them to their privately owned drills. These decals were printed and distributed during this reporting period.



Don't Make a Mistake-CALIBRATE!!!

University of Kentucky College of Agriculture, Food and Environment — grazer.ca.uky.edu — KADF Kentucky Agricultural Development Fund — KBNA Kentucky Beef Network LLC

1) Read your drill's operators manual to learn where the adjustments for leveling, seed depth, and seeding rate are located.
2) Ensure that seed tubes are not blocked by spraying them out with an air hose and running a wire through them. DO NOT SKIP THIS STEP!!!
3) Use the "Seeding Rate Chart" on the drill to determine the initial drill setting and set the drill accordingly.
4) Select the proper gear box setting or drive gear for the desired target seeding rate based on the manual.
5) Place a small amount of seed above each opening in the drill box.
6) Lower the drill to engage the seeding mechanism.
7) Turn the seeding mechanism until seed comes out. Make sure that seed is coming out of each disk opener.
8) Disconnect three to five seed tubes from the disk openers.
9) Place and secure a collection container on each seed tube. A sandwich bag secured with a rubber band works well.
10) Pull the drill 150 feet OR turn the drive wheel the number of revolutions it would take to travel 150 feet.
    a. Revolutions can be determined by using the following formula: Number of Revolutions = 150 / (3.14 x Diameter of the Drive Wheel in feet).
11) Carefully remove collection containers.
12) Tare the scale for an empty collection container and then weigh and record in grams each collection container with the seed in it.
13) Add the seed weight for each collection container together and divide by the number of seed drop tubes collected to get the AVERAGE weight per disk opener.
14) Compare the AVERAGE weight per disk opener to the grams of seed/disk opener found in Table 1 for the desired seeding rate and row spacing.
    a. If the collected weight is within 10% of the target weight found in Table 1, then you are finished.
    b. If the collected weight is more than 10% different than the target weight found in Table 1, repeat steps 7 to 12 after adjusting seeding rate setting on drill.

Items Needed to Calibrate Drill:
1. Tape measure (150 feet)
2. Flags to mark stopping and starting points
3. Gram scale with 0.1 gram accuracy
4. Plastic sandwich bags
5. Rubber bands

Table 1. Grams of seed to catch per disk opener in 150 feet for given combinations of disk opener width (inches) and seeding rate (pounds/acre).

Distance between Disk Openers	Seeding Rate in pounds/acre																					
	2	4	6	8	10	12	14	16	18	20	25	30	35	40	50	60	80	90	100	120	140	160	180
inches	grams of seed/disk opener to catch in 150 feet																						
6	1.6	3.1	4.7	6.3	7.8	9.4	10.9	12.5	14.1	15.6	19.5	23.5	27.4	31.3	39.1	46.9	62.5	70.4	78.2	93.8	109.4	125.1	140.7
7	1.8	3.6	5.5	7.3	9.1	10.9	12.8	14.6	16.4	18.2	22.8	27.3	31.9	36.5	45.6	54.7	72.9	82.0	91.1	109.4	127.6	145.8	164.1
7.5	2.0	3.9	5.9	7.8	9.8	11.7	13.7	15.6	17.6	19.5	24.4	29.3	34.2	39.1	48.9	58.6	78.2	87.9	97.7	117.3	136.8	156.3	175.9
8	2.1	4.2	6.3	8.3	10.4	12.5	14.6	16.7	18.8	20.9	26.1	31.3	36.5	41.7	52.1	62.6	83.4	93.8	104.3	125.1	146.0	166.8	187.7

A YouTube video on grain drill calibration can be viewed on the KYForages YouTube Channel at https://www.youtube.com/c/KYForages

Field Days & Other Demonstrations

- Western KY Dairy Pasture Walk- A pasture walk and program, attended by 22 producers, was held in Todd Co on John Beeler's farm. This program highlighted managing spring forages for lactating dairy cows and key components on managing economical dairy production in a grazing system. Another pasture walk/program is planned in Christian Co for July 2018.
- Frost seeded clover demos in eastern KY: We continue to follow-up with these farms to review response to correcting forage nutrient deficiencies.

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Collegiate (Eastern KY and Berea) Grazing School

- A two-day school was held at the Eastern KY Dairy Facility for 27 students at Eastern KY University and Berea College on April 9th and 10th. Besides those students that will return home to manage their family operations, some of these students will be hired upon graduation in allied industries and will be able to use this knowledge base while serving producers in KY.

Educational Opportunities Planned for 2018

- We are currently making arrangements for a grazing school this fall in Woodford Co. This program will focus on grazing practices during the summer/fall. Warm season variety plots will be planted this summer and the alfalfa/Orchardgrass field used for demonstration is being managed with timely hay or grazing to allow for use during the school.
- As previously mentioned, we are also planning a grazing dairy field day in western Kentucky.