Inside Your Newsletter...

Yield and Profit Maximizing Annual Forage Rotations in the Central Great Plains

Tri-State Cow Calf Symposium

Start The New Year Out Right

Goals

Cover Your Acres

Winter Conference

Current Financial Status of NWKS Farms

Oils, and Surfactants, and Drift Agents, Oh My!

The world of adjuvants

Nutrient Management Strategies

Cover crops and grazing for soil health in western Kansas

Weather Outlook and Mesonet Tools

Are you able to help your neighbor?

Sessions:

Make your plan: Weed Management 2023

Market Outlook - Local to Global Influences

Row-Crop Decisions: Dryland and Limited Irrigation Management

Wheat: The crop with 9 lives

Panel Discussion: When to hold them, when to trade them. Machinery management strategies

The full schedule and registration:

www.northwest.ksu.edu/CoverYourAcres

The same schedule is offered both days, so you can pick which day works best for your schedule!

Tri-State Cow Calf Symposium

"Adapting in Times of Uncertainty"

January 27th, 2023 ~ Bird City, KS

Program includes:

- Cattle Market Outlook
- Short Term Forage Considerations
- Ground Beef Alternative Taste Panel
- Weather Outlook
- Producer Panel "Planning & Pivoting for Drought"

Please see the Livestock page for more details.

Registration required by January 20th

Individual: $15

Student/Youth: $10

Fees cover lunch and refreshments

*For more information see the Livestock page
Yield and Profit Maximizing Annual Forage Rotations in the Central Great Plains

With the dry conditions and concerns with forages to feed cattle, this article from our K-State Agronomists John Holman at Garden City and Augustine Obour at Hays outlines forage production system research.

Introduction

Forage-based rotations with greater forage nutritive values and efficient resource utilization are needed to increase forage availability in the central Great Plains. The objectives of the current study were to quantify forage yield, nutritive value and net return from individual crops and overall crop rotation sequence of winter triticale, forage sorghum, and spring oat.

Materials and Methods:

Forage yield, nutrient analysis and economic data presented herein were from a study conducted at the Southwest Research-Extension Center near Garden City, KS from 2013 through 2020. The treatments were (1) continuous forage sorghum rotation with no-tillage (S-S NT); (2) winter triticale/double crop forage sorghum-forage sorghum-spring oat rotation with no-tillage (T/S-S-O NT); (3) winter triticale/double crop forage sorghum-forage sorghum-spring oat rotation with single tillage after spring oat (T/S-S-O RT); (4) winter triticale/double crop forage sorghum-spring oat rotation with no-tillage (T/S/S-S-O NT); (5) winter triticale/double crop forage sorghum-spring oat with single tillage after spring oat (T/S-S-O RT); and (6) a winter triticale-spring oat with single tillage after spring oat (S-O NT). There were four replications for each treatment and plot size was 30 ft by 30 ft.

Results

Averaged over the years, there was no significant treatment effect on oat forage yield due to tillage and crop rotation treatments. Forage sorghum yield was 26% greater in the S-S compared with T/S-S-O (NT) treatment. Triticale forage yield was 41% more in the T/S-S-O (RT) compared with T/S-S-O (NT) or T/S-S-O (RT) treatments. Overall, annualized forage yield was greatest for S-S and T/S-S-S-O (NT and RT) and was the least for T/S-S-O (NT) and T-S-O treatments (Table 1).

Nitrative value of the three forage crops in the study varied as expected. Triticale had the greatest CP, forage sorghum had the greatest ADF and NDF, and oat had the greatest Ca, K, P, and IVTDMD compared with the other forage species. The higher nutritive value of oat and triticale combined with the higher yield of forage sorghum integrated into one crop rotation is a benefit of the forage rotation, i.e., to supply all necessary nutrients and biomass yield to meet livestock demand. Crude protein is an essential nutrient for livestock and is positively correlated with both dry matter digestibility and organic matter digestibility where as ADF and NDF are negatively correlated with forage digestibility. Crude protein content decreases with maturity and plants were harvested at heading in this study to optimize both yield and nutritive value. Legumes (not included in our study) have much higher CP than grasses, however, in semi-arid regions, legumes tend to produce less dry matter and often not enough to cover the cost of production (Holman et al. 2018, 2022). Among treatments, there was a 23-31% greater CP for T-S-O and T/S-S-O compared with S-S. The differences in CP among rotation treatments is consistent with individual crop CP. The presence of forage sorghum in rotation tended to decrease CP concentration because forage sorghum had less CP than triticale or oat. The nutritive value differences were minimal among rotation treatments with the exception that S-S tended to have greater ADF and NDF, and lower CP, IVTDMD, Ca, and P concentrations compared with other treatments. Of the treatments, S-S was among the top in net return due to greater forage sorghum yields. However, the T/S-S-S-O (RT) treatment was among the greatest in all four measures, i.e., productivity, stability (based on prior report), nutritive value, and net return (based on this report). Our findings also showed raising forage sorghum and triticale may be more economical compared to some purchased alternatives. We concluded forage producers should consider growing a rotation of forages throughout the year to reduce production variability and weather risk, while increasing forage yield, nutritive value, and value in designing profitable forage systems.

Table 1. Forage accumulation in oat, forage sorghum, and triticale for six rotation by tillage Treatments at Garden City, KS, average for years 2013 – 2020.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Oat Total lb/ac</th>
<th>Oat Annualized lb/ac</th>
<th>Forage Sorghum Total lb/ac</th>
<th>Forage Sorghum Annualized lb/ac</th>
<th>Triticale Total lb/ac</th>
<th>Triticale Annualized lb/ac</th>
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<td>S-S (NT)</td>
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<td>3935</td>
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<td>T-S-O (NT)</td>
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K-State Research and Extension is an equal opportunity provider and employer.
Tri-State Cow Calf Symposium set for January 27th, 2023

"Adapting in Times of Uncertainty"

January 27th, 2023
American Legion Hall
113 W Fourth Street
Bird City, KS

Program Schedule

9:30 a.m. CT
Registration and Refreshments

10:00 a.m. CT
Market Outlook
Stephen Koontz, Ph.D (or alternative)
Colorado State University Professor, College
of Agricultural Resources & Economics

10:30 a.m. CT
Short Term Forage Considerations
Jerry Volesky, Ph.D
Professor, Nebraska Extension Range &
Forage Specialist

11:00 a.m. CT
Ground Beef Alternative Taste Panel
Lane Egger (or alternative)
K-State Research & Extension Associate

12:00 noon CT
Lunch and visit with sponsors

12:40 p.m. CT
Weather Outlook
Chip Redmond
Assistant Agronomist Incident Meterologist
for Kansas Forest Service

1:00 p.m. CT
Producer Panel - planning and pivoting for drought
Moderated by Keith Harmony, Ph.D

2:00 p.m. CT
Wrap-up and Adjourn
Start the New Year Out Right!!!

Crispy, crunchy, colorful, and curiously delicious—all are words that describe a wide variety of vegetable, fruit, and whole grain dishes. The body’s nutritional requirements can be adequately met by consuming plant-based foods. Most plant-based foods are naturally low in calories and fat. Couple that fact with the high amount of antioxidants and fiber found in plants and a strong case is made for putting more plants on your plate.

WHAT ARE WE EATING?

On average, adults living in the United States consume almost 600 calories per person beyond what is needed each day for growth, maintenance, and physical activity.

The estimated number of calories needed by the average adult is 2,200 each day. The increase in calories eaten beyond those needed for growth, maintenance, and physical activity explains why the number of overweight children and obese adults in the U.S. is increasing.

Think about it. When our stomachs are empty and our schedules are full, we tend to grab and eat. Chances are, there is not much thought as to how nourishing or even how satisfying the foods really are. Then, when we gain a few extra pounds, we look to quick-fix solutions for help. Instead, why not turn to a diet with more plants that is full of nutrients, low in calorie, and very satisfying?

Many factors are identified as causes for weight gain. The balance of calories stored and burned depends on genetic makeup, the level of physical activity, and how many calories the body burns while you rest. Weight is maintained when calories consumed in a day are consistently burned. Weight gain occurs when more calories are consumed than expended.

Vegetables, fruits, legumes, and whole-grain foods typically provide a feeling of fullness with fewer calories, compared to other types of foods. Putting more of these kinds of plants on our plate can make it easier to manage your appetite and maintain body weight.

Transitioning to a healthier diet

<table>
<thead>
<tr>
<th>Eat this</th>
<th>Instead of</th>
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<tbody>
<tr>
<td>Brown rice</td>
<td>White rice</td>
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<tr>
<td>Stone-ground 100% whole-wheat bread</td>
<td>Enriched white bread</td>
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<tr>
<td>Rolled oats</td>
<td>Refined grains and sugary cereals</td>
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<tr>
<td>Whole fruits</td>
<td>Fruit juice</td>
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<td>Baked sweet potato</td>
<td>French fries</td>
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<td>Whole grain flour tortillas</td>
<td>White flour tortillas</td>
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<td>Legumes: lentils, peas and beans</td>
<td>Highly processed meal in a box</td>
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<td>Air-popped popcorn</td>
<td>Cookies</td>
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</table>

WHERE TO GO FROM HERE

Many people simply live to eat. For improved health, now is the time to eat to live. Adopting a more plant-based diet requires a change in thinking. As research in nutrition has advanced, it has become apparent that there is room for improvement with the typical American plate. Consider including generous portions of vegetables, fruits, whole grains and lean protein choices at each meal. The options in the table above can give you an idea of where to start. This gradual transition to a plate with less high-fat and more nutrient-dense choices seems to be central in managing many of the health problems that concern us most.

It’s your choice to choose what’s right for your body and health.

Have a GREAT NEW YEAR!!!
• What do you want to accomplish in 4-H this year?
• What help do you need to reach your goals?
  • Who can help you reach your goals?
• How can you make sure you accomplish your goals on time?

Because it is nearly impossible to accomplish something without a plan
— it is time to develop your ...

Personal Goals
Improve my public speaking skills by doing a project demonstration.
  Attend all club meetings.
  Try out a new project.
  Start on my projects and project record forms early in the year.

Learning Experience Goals
Attend a project meeting, self-study, or take a class to learn more about my projects.
  Identify a skill you want to learn or improve.

Citizenship Goals
Identify a need in my community and do something about it.
  Help someone or an organization in my community in my project area.
  (i.e. donate something you make to a person or organization)

Leadership Goals
Teach one other person in a project area learn something I already know.
  Take on a leadership role in my 4-H club to plan, teach, or organize something.

Kansas 4-H Project Goal Form
Project goals help you think about what you want to do, make, and learn in your projects this year.
  They help you decide when you need to get started so you finish your projects on time!
There are 3 parts: the action (how you will do it), the result (what you will do), the timetable (when will do it?)

https://bookstore.ksre.ksu.edu/pubs/4H1100.pdf (Fillable sheet)
Officer Training will be held in Cheyenne County on January 3rd at the Extension Office.

4-H Horse members please be aware of changes made to the new horse ID. Also Kansas State Fair qualifications. New information is posted on Kansas 4-h.org. Also an email was sent to 4-H horse members from the State Office. Contact the Extension Office with any questions.

785-332-3171.
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Cheyenne County
Important Dates

January 1 ..........Happy New Year
January 2..........Prairie Dale
January 2 ..........Extension Closed
January 4 ..........Foods
January 4 ..........JR Leader Meeting
January 8.........Ruleton Eager Beavers
January 10........Horse Panorama reg. due
January 13........KPRF going to the NW Area Screening due to Extension
January 15 ........Sunflower 4-H Club
January 16 ......Cloverbuds
January 16 ......Country Clovers
January 16 ......Martin Luther King/Extension Office Closed
January 20 .......NWKS Record Book Judging
January 28 ......Horse Panorama

Upcoming Events
It’s not too early to start thinking about Spring Events which include:
4-H Club Days & Talent Night, Project Talks, Demonstrations, Creative Tables, Promotional Posters, and Model Meetings.

4-H Days and Talent Night
Registration Due: February 10, 2023
Friday, March 10, 2023

Creative Tables
Registration Due: February 10, 2023
Friday, March 10, 2023
F.Y.I. Your creative food table could also be a talk!!!

Promotional Posters
Registration Due: February 10, 2023
Please get in touch with the office for your Club Model Meeting to schedule your time with Karen.

If you need information on Project Talks, Demonstrations or Public Speaking stop by or call the Extension Office at 785-890-4880.

Congratulations!
To Mason Berls for his KS Project Report Form that qualified to go to Regionals in the Wildlife Sports Fishing Project.

Horse Panorama
The State Horse Panorama for adults & youth will be at the K-State Salina Campus on January 28, 2023
Registration closes: January 10, 2023

Sherman County January 2023 Newsletter

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<tr>
<td>Ruleton Eager Beavers</td>
<td>3:00 PM</td>
<td>4-H Building</td>
<td>Horse Panorama Registration Due</td>
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<td>Sunflower 4-H</td>
<td>3:00 PM</td>
<td>4-H Building</td>
<td>Cloverbuds 5:30 - 6:30 PM</td>
<td>4-H Building</td>
<td>Country Clover 7:00 PM</td>
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**Extension Closed**

*January 16, 2023*
Dates to Remember

January
9– 4-H Council Mtg—Sharon Springs
16– Office Close
17– Record Books due to office
20– KAP Judging—Hays

February
5– Large Animal Weigh-in
20– Office Closed

March
16– Babysitting Clinic – St Francis
20- County Club Days—TBD
24- Regional Club Days—Brewster—TBD
– NW 4-H Judging—Hays—TBD

4-H Council Meeting will be held at the Extension Office January 9 @ 6:30 p.m.

Record books that are going on to regionals, are due in the Extension Office by January 17.

Qualifying KAPs

Goat
Kenli Larson
Leadership
Brennan Aldridge

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# January 2023

## Wallace County

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![Happy New Year](image)

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Cover Your Acres

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