Meaning

My dictionary says adapt is a verb and it means to adjust to a specific use or situation. If a person wants to efficiently raise animals by feeding the animals on pasture forages that the person raises, he must plan ahead to be able to adapt very quickly to the situations that he will be faced with.

Excessive Rain

I feel one of the quickest ways to ruin a good pasture is to have excessive rain while your animals are grazing this good pasture. If you will set up a wet weather pasture that you can put your animals on when you get heavy rains, you will be able to save your good pastures.

My wet weather pasture has the best drainage, due mainly to sloping ground, of all my pastures. The forage in this pasture is endophyte free tall fescue and red clover. Tall fescue has very thick sod and can take some abuse. I keep my red clover going by broadcast seeding 5 pounds red clover seed per acre every year in late February. Some people say it is only necessary to do this every other year. With the present price of nitrogen fertilizer, I feel I can justify doing it every year. Also, since broadcast seeding red clover into an existing fescue pasture is not the most predictable seeding method, doing it every year has provided me with a good stand of red clover in my fescue pastures every year.
Rain Shortage

I first started no-till drilling pearl millet seed (1/2" deep and 20 pounds/acre) with 40 pounds ammonium nitrate after wheat to provide my cattle with a warm-season grass pasture during late August and September. During drier years, I had run out of cool-season pasture, and the pearl millet carried the cattle through late summer.

One year I had some cheap soybeans, and I drilled the soybeans (1-1/2 inches deep and 80,000 seeds per acre) into the wheat stubble before drilling the pearl millet seed. When I turned the cattle into this pearl millet-soybean pasture, I was concerned that the cattle might bloat from the soybeans. I saw no bloating and observed that the cattle really seemed to enjoy the pasture.

Extended Grazing

The last two years have been above normal rainfall for my farm (to the point it has been very hard to get hay baled without getting it wet). This year, I drilled pearl millet after wheat and as usual put the cattle into the pearl millet field in late August. I got an unexpected surprise in that my cool-season pastures kept right on producing through late summer because of the above normal rainfall. This enabled me to use my regular cool-season pastures to extend the grazing season into late fall and early winter, after the cattle had eaten the pearl millet.

June 21 Purdue Forage Day in Lawrence County, Indiana
Educational presentations will be given in the morning; machinery will operate in the fields in the afternoon.

June 29 & 30 Grazing 102 at the Feldun Purdue Ag Center, Bedford, IN
This is a hands-on workshop that covers topics that enables graziers to develop rotational grazing goals for their pasture acres.

If there are inaccuracies in your address label or if your circumstances have changed and you no longer want to receive this newsletter, please notify Ed Heckman by using one of these methods: 765 557-0401; btrefoil@yahoo.com, or 29183 N. Duck Creek Ave., Atlanta, IN 46031-9732. In addition, if you would like to receive this newsletter electronically or if you want to add someone to the mailing list, use the same methods to contact Ed.
Should You Keep That Alfalfa Stand?

Producers frequently question if their alfalfa stands should be kept for another year or rotated to corn in the spring. Marvin Hall, Penn State University Agronomist, says recent research can help in assessing the productivity and profitability of a questionable alfalfa stand.

The magic number of plants that traditionally indicated when it was time to rotate out of alfalfa was four to five per square foot. However, depending on fertility and weed invasion, alfalfa stands with five plants per square foot can yield as much as a stand with 10 or 15, Hall notes. "The correlation between plants per square foot and yield is very low since individual alfalfa plants respond to decreasing stand density by producing more stems," he says. "Increased stems per plant compensate for fewer plants and maintain the yield."

The number of stems per square foot may be a better indicator of the productivity of an alfalfa stand. Fields with 55 or more stems per square foot produce maximum yields, according to Hall. As the stem number declines below 55 per square foot, yields begin to decline. Once stem numbers fall below 40 per square foot, alfalfa fields begin to lose profitability and should be rotated out of alfalfa.

Printed with permission from Hay & Forage Grower, eHayWeekly Newsletter, September 27, 2005
Graziers’ Comments

Ed Heckman

The KEY to successful grazing management is to first learn about all the 'recommendations and studies', and then sort through them until you find what works on your farm. Next, be prepared to have that kinky Mother Nature blow your 'plan' out the window in any given year -- stored feed options, changes in pasture size and supplements, etc. YOU are the only 'expert' that can define what works for your cows on your farm. Dick Conklin, NY

You can manage things you can measure. Temple Grandin, CO

Don’t judge each day by the harvest you reap, but by the seeds that you plant. Robert Louis Stevenson

We are frequently asked to name the best pasture mix. It doesn’t make much difference what is planted; you will have something completely different after five years. Jim Gerrish

We all have connection to the land. Chief Old Person

There is no better demonstration of faith than a man planting seed in a field. Anonymous

Soil scientists love pasture soils. They sequester soil organic carbon very easily and in high amounts. Julie McMichael, IA

Forage left in a pasture after grazing isn’t wasted. It helps pasture regrow more quickly. Greg Cuomo, MN

Nutrients harvested by grazing animals cost less than half as much as nutrients harvested and fed as stored feed like hay or haylage. Jimmy Henning, KY

A cow prefers a varied diet; she prefers white clover/orchardgrass, but she would choose about anything else if give the choice after several weeks of white clover/orchardgrass. Andre Voison

Phosphorus grows more grass than nitrogen does. Vaughn Jones, NZ

The greater the difficulty, the more glory in surmounting it. Anonymous

Happiness lies not in the mere possession of money; it lies in the joy of achievement in the thrill of creative effort. Franklin D. Roosevelt
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How Can I Produce Forage In a Sacrifice Paddock?

(Editor’s Note: I belong to two email listserves that discuss grazing topics and issues. This topic was a thread last winter. The first three paragraphs describe the original poster’s situation, very common in the Midwest. Each set of asterisks is the start of a grazier’s response. This discussion occurred in February, 2006.)

I am looking for ideas... We have a 5-acre paddock we've begun to use for wintering 34 Angus brood cows. It is handy in the winter, as it is close to the buildings, has energy free water, is well drained but still reasonably flat, and it’s some distance from a stream. The other paddocks are not as ideal.

This winter, as it would seem most do now, is producing the typical amount of mud, and this paddock is getting pretty torn up. Round bales are fed in new spots every time to spread out the manure, yet the herd has been turning the areas around the bale rings into nothing but mud, and it will only be worse in March. Luckily the ground is staying fairly firm between where we've fed bales, so it isn't a solid mess throughout.

In the past, the muddy ring around these feeders has largely grown back with weeds the following spring and summer. After a year and some mowing, often some decent vegetation comes back. We plan to use this area yearly now, so we feel we need to get some type of decent forage growing in these disturbed areas...something cheap, yet productive, which will probably be trampled out again for the most part next winter. After possibly some minor touching/smoothing up with a blade, I had thought of just running over the areas with a drill and 2-3 bushels of oats for forage...should beat the weeds out of the ground and would last until freeze. I realize the trick with an annual like oats would be keeping it grazed and not letting it head out, if I wanted it to produce through the season.

**** I suggest no tilling in 20 pounds of Sikem Italian ryegrass and 5 pounds of ladino clover per acre. Drill in very shallow, about 1/4 inch. Do it as soon as you can in the spring. It will result in a thick, super high-quality pasture by around the 3rd week in May or 1st week in June. You will need to graze it, as it will be hard to make it into hay, but your cows will love it.

Another option is sudangrass or sudex.

**** In southern Kentucky sorghum-sudangrass (SS) seeded at 50 lbs/acre in the first week of May would be ready to graze 6 weeks after seeding (approx 15 inches in height). It would be taken down to approx 8-10 inches and be ready to graze again in 14-17 days (depending on if you had sunny days and not too many over-cast days during that period of time). As you move toward mid-July the SS would make more rapid growth and would begin to slow in growth around early Sept with mid-Sept seeing growth mostly come to a screeching halt! We then would drill cereal rye (100 lbs/acre) into the standing SS stubble without killing it down with an herbicide. Frost will take the SS out and the rye would be ready to graze by early November. Make sure the SS stubble is killed, or you face potential prussic acid poisoning. Rye then is ready to graze again by mid-March and make
additional growth thru early May at which time we would drill SS into the standing rye stubble without killing it and be ready to graze the SS by mid-June.

**** Annual ryegrass would be my first choice. Since this over-wintering area may be pugged up and have heavy manure and pee deposits, you might also consider that the area would be somewhat acidic after the winter use. Lime the area, and perhaps shallow disk, pulling a drag behind the disk to level and incorporate. Then drill in the annual ryegrass-white clover mix.

I stopped using Sikem Italian ryegrass and moved to Big Daddy last spring with good results. It produces more tonnage than Sikem.

**** Being from the conservative mindset, I'll offer another option. Let's say that you don't want to spend a lot for nitrogen, which would be necessary for both ryegrass and sorghum-sudan grass, yet still need some tonnage that oats generally don't afford. In the past on these areas I've used winter wheat with some variety of clover (usually alsike or medium red). Seeded in the spring, winter wheat should not head out, and it will make good use of the fertility the cows previously applied in winter feeding. I've found it also to be very aggressive growing and rather resistant to dry conditions. Winter wheat is the only cheap annual, when compared to the previously-mentioned species.

*** I would avoid annual rye grass for your purposes. Try Italian. With clover and Italian rye grass you will get a large amount of grazing from it 4 or 5 weeks after you plant it.

**** If you try wheat, I would use forage wheat and not the grain wheat. We plant forage master wheat.

**** I think that all ryegrasses (Italian, annual, perennial) and sorghum-sudangrass would be dollars wasted without applying nitrogen, at least a couple of times. I think some farmers make a common mistake of under-estimating the amount of nitrogen that is available, especially in an over-winter feeding area. I have grown some awesome corn and corn silage crops with a minimal amount of fertilizer in overwintering areas.

**** I like winter wheat because it seems far more tolerant of low moisture for a fraction the cost.

This newsletter is financially supported by Ampac Seed Company and CISCO Companies, Grazing Systems Supply, and the Indiana Grazing Lands Conservation Initiative. Your support is vitally important to this educational activity. Many Thanks!!!!

All programs and services of the Hamilton County Soil and Water Conservation District are offered on a nondiscriminatory basis without regard to race, color, religion, sex, age, marital status or disability.
**Regional Meeting Schedule**

**Tuesday, February 27**
- **The Log Inn - Haubstadt**
  - 9:00 a.m. - Registration
  - 9:30 a.m. - Welcome
  - 9:35 a.m. - "Can I Get Enough Indiana Grown Alfalfa for My Dairy Needs?"
    - Dr. Herb Bucholz, Michigan State University
  - 10:25 a.m. - Purdue Extension Dairy Specialties Distillers Grain Survey
    - Dr. Mike Schutz & Dr. Tim Johnson, Purdue Extension Dairy Specialists
  - 11:15 a.m. - Purdue Extension Update
    - Dr. Mike Schutz & Dr. Tim Johnson, Purdue Extension Dairy Specialists
  - 12:00 p.m. - Lunch
  - 1:00 p.m. - Industry Updates
  - 1:30 p.m. - "Cows That Walk Better Milk Better"
    - Michael Hlavaty, ZinPro
  - 2:20 p.m. - Wrap-up & Adjourn

**Wednesday, February 28**
- **Bartholomew County Fairgrounds, Columbus**
  - (Time EST)
  - 9:00 a.m. - Registration
  - 9:30 a.m. - Welcome
  - 9:35 a.m. - "Feeding Distillers Grains & Co-products"
    - Dr. Herb Bucholz, Michigan State University
  - 10:25 a.m. - "Can I Get Enough Indiana Grown Alfalfa for My Dairy Needs?"
    - Dr. Herb Bucholz, Michigan State University
  - 11:15 a.m. - Purdue Extension Update
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    - Michael Hlavaty, ZinPro
  - 2:20 p.m. - Wrap-up & Adjourn

**Registration**

Includes lunch and 1 copy of the handouts per farm or family.

IPDP Members
- Free registration (non-member) X ________________________
- Non-IPDP Members X ________________________

Additional attendees from a farm or family can also register:
- IPDP President & Board Members
- Dr. Mike Schutz & Dr. Tim Johnson, Purdue Extension Dairy Specialists
- Ron Fuhrmann, IPDP President & Board Members
- Michael Hlavaty, ZinPro

Please mail registration form & fee with checks payable to IPDP to:
- Indiana Professional Dairy Producers
- c/o Mike Schutz
- 125 S. Russell St. #105
- West Lafayette, IN 47907
Ten Reasons to Add Legumes to Your Pastures

1. **Lower Nitrogen Costs:** Legumes have the ability to obtain nitrogen from the atmosphere and fix it in nodules on the roots. The amount of nitrogen fixed varies depending on species, stand density, soil fertility, weather, and the amount of leaf surface on the legumes. The range is 60 to 200 pounds per acre per year.

2. **Improved Forage Quality:** Forage quality of legumes is generally higher than that of most grasses at the same stage of maturity. Legumes are generally higher in crude protein, digestibility and mineral content and are digested quicker than most grasses.

3. **Better Growth Distribution:** The addition of legumes to grass pastures often extends the grazing season and fills voids in grass monocultures. Some legumes can furnish quality grazing during the summer months, when cool-season pastures are less productive.

4. **Increased Forage Yield:** The total yield from grass/legume mixtures is usually increased over straight grass pastures. Studies at the University of Kentucky have shown that red clover grown with tall fescue pastures produces more total yield than tall fescue fertilized with 180 pounds of N per acre.

5. **Reduced Risk:** Mixtures of grasses and legumes constitute a lower risk than a pure stand of either. Mixed stands are less susceptible to devastation from disease, insects, and adverse weather.

6. **Added Benefits:** Legumes can improve soil tilth by creating deep root channels, which also improves soil drainage and the amount of air that is in the soil.

7. **Reduced Animal Toxicities:** Growing legumes with tall fescue is the number one strategy used to combat endophyte problems associated with tall fescue. Grass tetany problems can also be greatly reduced with legumes in the diet.

8. **Environmental Acceptance:** Because of the legume plant’s ability to "fix" nitrogen through Rhizobium bacteria, legumes provide natural, slow-release nitrogen. Because of their flowering habit, legumes furnish pollen and nectar for honeybees.

9. **Aesthetic:** legumes provide color and diversity to grass meadows and pastures.

10. **Increased Profit Potential:** More milk production, higher weaning weights, higher average daily gains, and higher reproductive efficiency are common, when legumes make up a significant portion of the forage mix.

Legumes are agronomically sound, environmentally friendly, and economically advantageous

Adapted from article in: Management Intensive Grazing in the Ozarks, Edited by Mark Kennedy
Some Water Options for Rotational Pastures

Beef producers have two options where water for a rotational pasture situation is concerned according to Dan Morrical at the Iowa Beef Center -- either take the water to cattle or take the cattle to water. The Iowa State University (ISU) professor of animal science says graziers have historically done the latter. "But for increased output," he says, "we need to do the former."

Moving water takes some engineering and planning, he adds, so graziers also need to make some calculations to determine the amount of water that is required and how to get it to where it is needed. In most rotational grazing systems, stocking rate will increase over time as pasture productivity improves, so one needs to plan for herd expansion by 50% or more, he says. "Cow-calf pairs will consume 20 gallons per head per day and up to 30 gallons on high heat stress days. If we assume our herd of 50 cows may expand to 100 with improved grazing management, the water delivery system must provide 3,000 gallons/day," Morrical says. "With four hours of pumping time, we need to deliver 12.5 gallons/minute. A 1-inch pipeline can only deliver that rate out to 300 ft. from the pump, whereas a 1.5-inch pipe can deliver 12 gallons/minute up to 2,000 ft." Morrical says pumping water is his preferred option for watering livestock in a rotational system. In most cases, above-ground water lines are the cheapest option, but they are higher maintenance than buried lines. "Gravity flow can also be used for paddocks below ponds, but such ponds must be built with adequate holding capacity and drainage area to keep them full," he says. Pushing water up hill is more challenging, and it requires more pressure and energy. Storage tanks located on high ground in the pasture system offers the producer flexibility in moving water in multiple directions. Gas engine pumps are the easiest means of getting water pumped up hill. Morrical says a combination of multiple water delivery methods make the most sense in many systems. This might mean some paddocks use gravity flow below ponds, while pressure systems on wells are used for paddocks located above ponds.

Nose pumps allow cattle to water themselves -- 25 cows per pump is the maximum and construction costs to anchor pumps can be issues.

Morrical says creativity is the best approach to water distribution in a rotational grazing system. He suggests graziers visit with their area livestock specialist, their NRCS Grazingland Specialist, attend pasture walks and read the references below to develop a watering system for their situation.

To learn more, check out the following internet resources:

Watering Systems for Grazing Livestock – Iowa State University -
http://www.extension.iastate.edu/Publications/PM1604.pdf

Selection of Beef Watering Systems - University of Tennessee -

Pumping Water from Remote Locations for Livestock Watering – Virginia Tech -

All-Weather Concrete Stock Tank – University of Missouri -
http://muextension.missouri.edu/explore/agguides/agengin/g01161.htm


From Cow-Calf Weekly and Dan Morrical, Iowa Beef Center
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Heart of America Grazing Conference
January 24 and 25, 2007

The Heart of America Grazing Conference began in 2002 in Illinois as a joint educational effort between industry and university individuals and producers to provide livestock producers with the most current regional grazing information and resources. The 2007 conference continues this diverse program approach and returns to Mount Vernon, Illinois, January 24 and 25 at the Holiday Inn.

The conference kicks off at 6 pm January 24, with dinner followed by keynote speaker, Jim Gerrish of American Grazinglands Services LLC, presenting “Grazing Across the Country and around the World: Implications for the Heart of America”.

The program resumes at 8:20 am on January 25, with a main session covering a variety of topics including pasture supplementation, grazing organic livestock, stocking rates, legume utilization and residual forage height management. Following lunch the program continues with a producer panel followed by four breakout sessions: **Tall fescue management** - Craig Roberts, University of Missouri, and Chris Agee, Pennington Seed, Inc.; **Grazing as a part of crop rotation** - Ed Ballard, Grazing Consultant and Ben Tracy, University of Illinois; **Fence and Water** - Victor Shelton, Indiana NRCS and Brad Halbrook, Modern Livestock Systems, Inc.; and **Pasture Establishment** - Keith Johnson, Purdue University, and Dennis Epplin, University of Illinois.

In addition to educational programming, a grazing and pasture-focused trade show and a silent auction will also be part of the conference. Advanced registration is $50 for two days or $30 for one day. After January 12, the registration increases to $60 and $40 per attendee for full and single-day registrations, respectively. Registration includes proceedings, conference materials and meals.

In order to view the entire program visit [http://www.livestocktrail.uiuc.edu/pasturenet](http://www.livestocktrail.uiuc.edu/pasturenet) and check under Events. Registration can be accomplished at [http://web.extension.uiuc.edu/HOAGC](http://web.extension.uiuc.edu/HOAGC). For more information contact Justin Sexten, Extension Specialist, Animal Systems/Beef, at (618)242-9310 or sexten@uiuc.edu.
2007 Northern Indiana Grazing Conference

Friday, February 2, 2007 is the date set for the Northern Indiana Grazing Conference. The conference will be held in the Antique Auction Barn in Shipshewana, Indiana. The theme for this year’s conference is “Grazing Management”. This year’s keynote speaker will be Jim Gerrish of American GrazingLands Services LLC from May, Idaho. Jim will be sharing his experience in research at the University of Missouri, along with his personal experiences on his family farm in northern Missouri. This year’s evening session will be led by Karl Dallefeld from Midwestern Bio-Ag, Worthington, Iowa. His focus will be “Forage Nutrition from the Soil Up”.

There are two farmer panels scheduled – one in the morning with graziers who are just getting started - Atlee Yutzy, Nappanee, Indiana; Floyd Schrock, LaGrange, Indiana; and Ivan Barkman, Millersburg, Ohio. The second panel in the afternoon will focus on grazing management featuring more experienced graziers – Matthew Schlabaugh, Millersburg, Ohio; Elmer Martin, Tippecanoe, Indiana; and Steve Hooley, LaGrange, Indiana.

The conference will begin with registration at 7:00 a.m. and the welcome at 8:00 a.m. The daytime portion of the conference will be completed at 4:00 p.m., with the evening session beginning at 5:30 p.m. and lasting until 8:30 p.m. Registration fee is $25.00 for the first person on the farm and $15.00 for each additional person. Registration deadline is January 19. On-site or late registration increases to $35 per person and $20 for each additional person on the farm.

For a complete registration form, contact the LaGrange Co. SWCD at 260-463-3471 ext 3.