Forage Management Necessities

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PURDUE AGRICULTURE | AGRONOMY

Self Examination – Evaluate Your Pasture Management

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
I soil test at least every third year and fertilize based on the test results.					
I know the major soil types on my farm by name and know their strengths and weaknesses.					
I can identify the major forages growing in my pasture and know their strengths and weaknesses.					
I remove livestock from the paddock when forage growth is around 4 inches in height.					
I stockpile perennial pasture in the late summer and early fall.					
I evaluate pasture growth and potential concerns with the pasture weekly.					
I document when livestock are moved from paddock to paddock.					
Where possible and applicable, I graze crop residues and double crop forages to full potential on my farm.					
I have an agronomist on my list of professionals.					

Self Examination – Evaluate Your Hay Management

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
I soil test at least every third year and fertilize based on the test results.					
I can produce hay profitably "on paper" with reasonable assumptions about yield, quality and input costs.					
I scout my fields for the presence of weeds, insects and diseases.					
I utilize available technologies to reduce the amount of rain-damaged hay.					
I really try to harvest first cutting hay before the grass begins pollination.					
I protect high quality hay from weather damage.					
I have a marketing plan to sell hay not utilized by the cattle.					
I use forage testing to determine what hay should be fed to different cattle types and how it is best supplemented.					

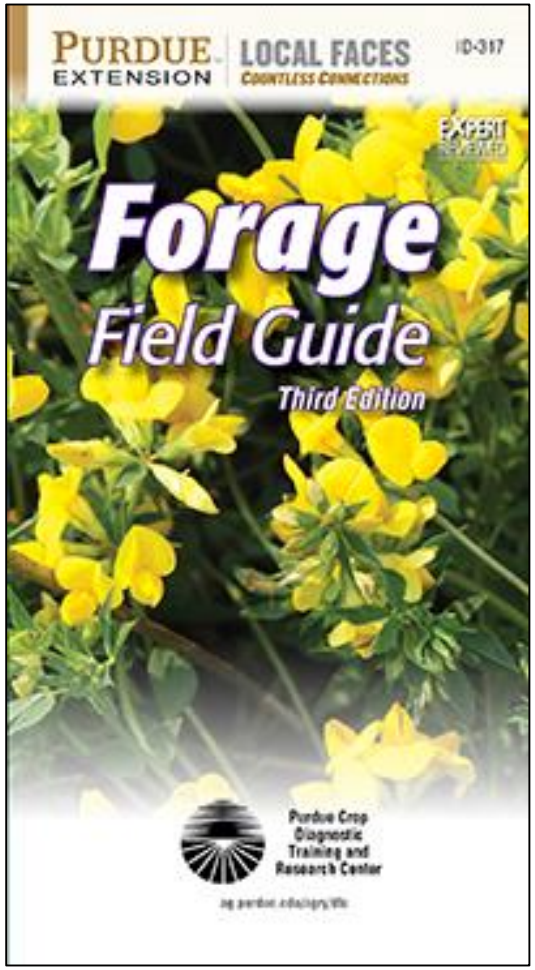
People - Crop Advisors Should Add Value

Extension Network
Your Purdue Extension Educator has connections locally, regionally and with the Purdue campus.

Develop a Network of Trained Professionals

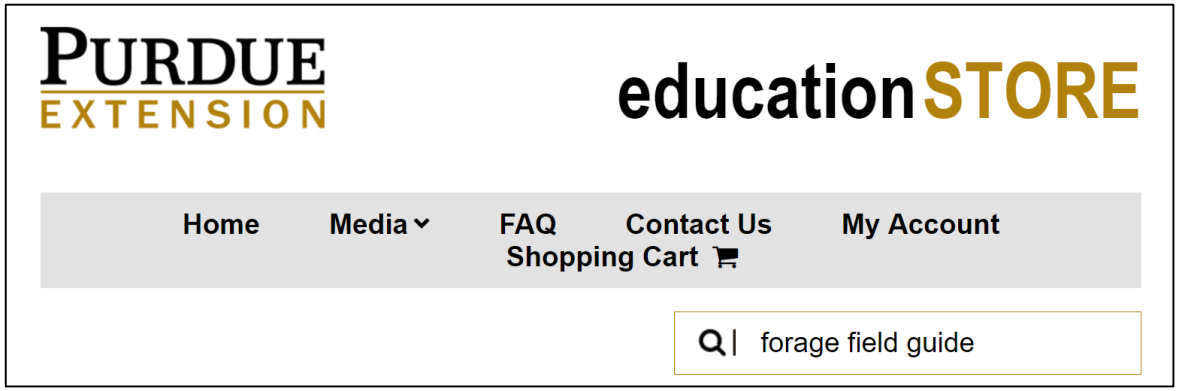
- Find professionals that are knowledgeable and responsive
- Build good working relationships BEFORE a problem occurs
- Your county's Purdue Agricultural and Natural Resources Extension Educator and Natural Resources Conservation Service office are valuable resources

Resource Materials



Where do I get one?

- Purdue Education store
  edustore.purdue.edu
- $9 each



plants.usda.gov
Identifcation apps

Calendar

Will you be timely or tardy?

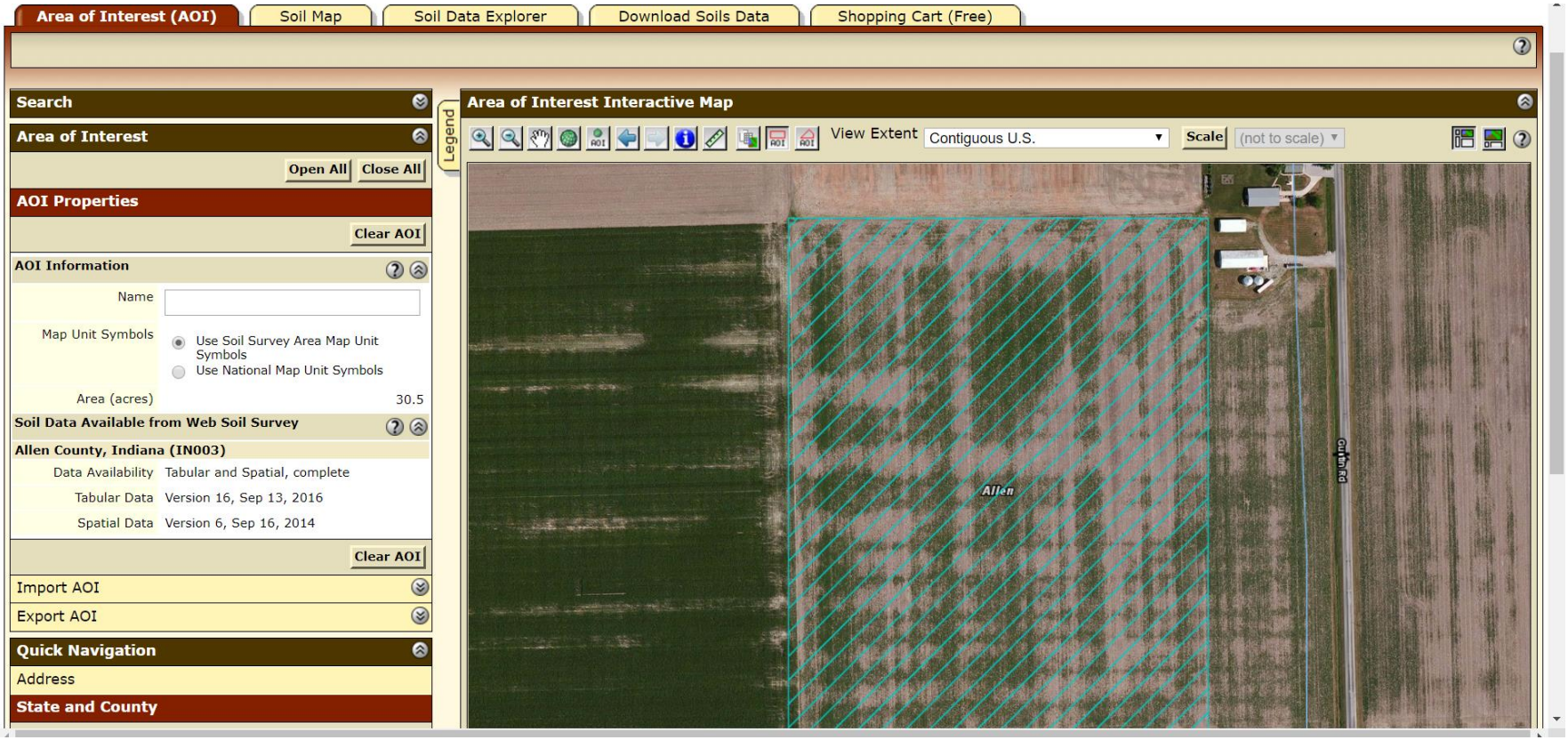
- When did you last scout your fields?
- What time of year do you want to reseed or reestablish a field?
- What is the appropriate timing for soil testing, fertilizer and herbicide applications, and cutting the first harvest?

Web Soil Survey – Do you know your soils?

https://websoilsurvey.nrcs.usda.gov/

Useful for:

soil sampling, forage species selection, building sites



Soil Probe

Soil Testing

- Be consistent in timing of each sampling year
- Sample every 3 years or when big changes occur
- Use soil test results to put a fertilizer management plan in action
  - X-X-X is not acceptable!

Weed Control Guide – Some weeds are "weedier" than others!

Spray, till, or rotate crops?

- Purdue WS-16
  - PDF online
  - Hard copy
- Identify problematic weeds
- Determine best control practices
- Harvest restriction and crop rotation interval

Sweep Net

Aphids, Leafhoppers, and more!

- Scouting for insects should occur on a weekly basis
- Utilize a source like the Purdue Forage Field Guide or online source to determine if control is advised
- Befriend an entomologist if you need help in learning how to ID your insects!

Yard stick and algebra

Avoid overgrazing

- Equations are found in the Purdue Forage Field Guide
- Helps determine length of stay in a pasture and stocking capacity
- Move on to another paddock when there is 4” residual height

Hay Probe

http://centralidahoextension.blogspot.com

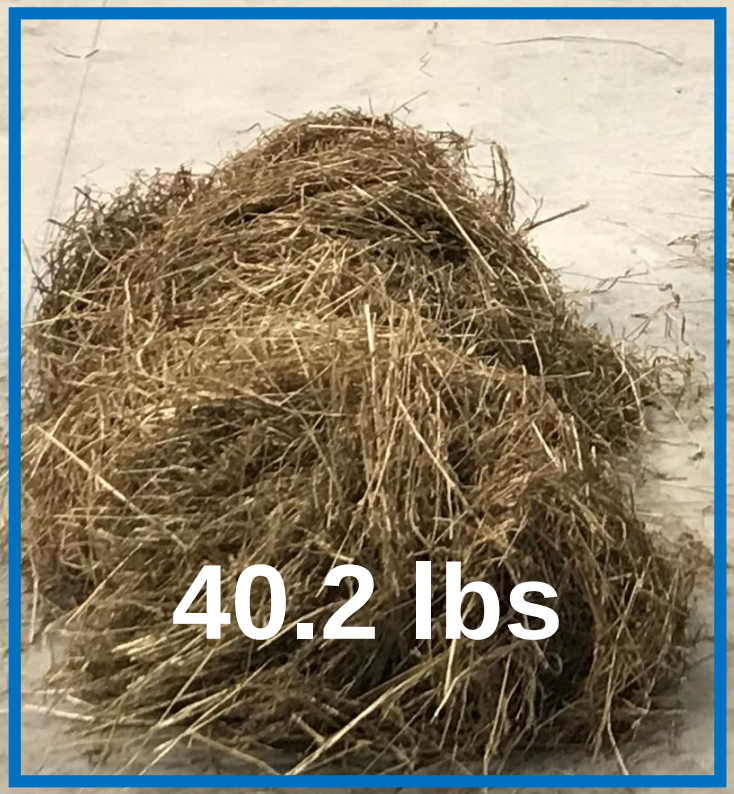
I "think" vs I "know"

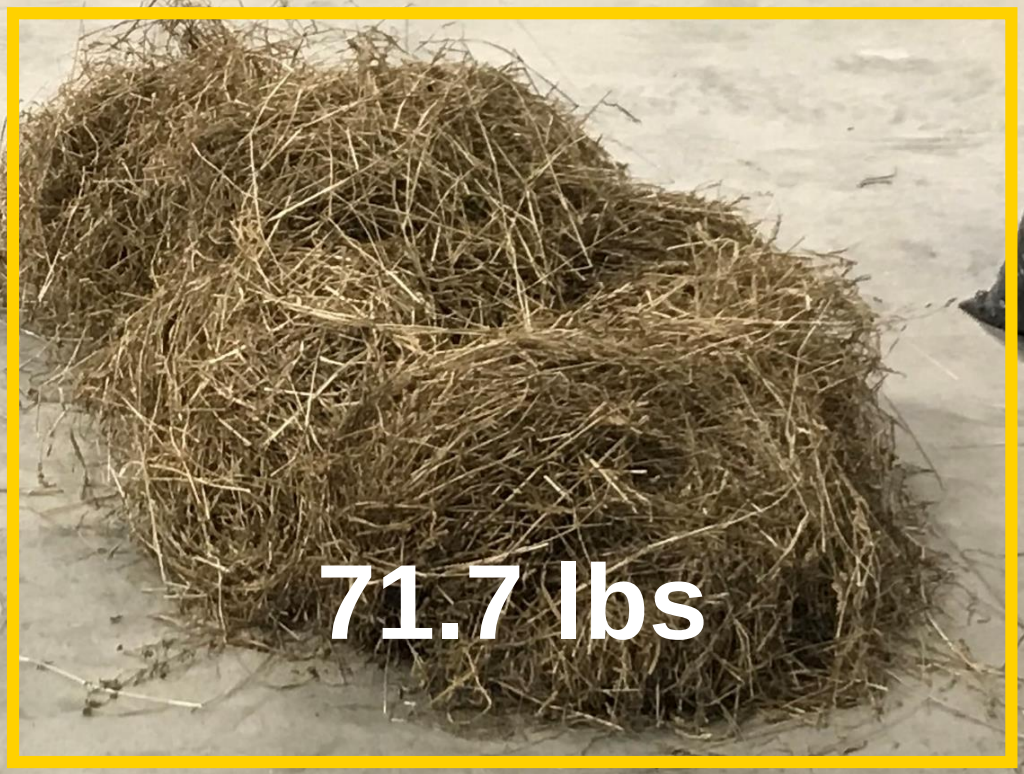
- Testing forages for nutritional value
  - Aids in formulating rations
  - Selling point for customers
- Can test forage that may contain molds or other poisonous substances
- Many different hay probe options

Best Online Resource:
www.foragetesting.org

Body Condition Score 3-

Courtesy of Dr. Nick Minton, Purdue Beef Systems Specialist





- One pile represents the daily amount ***required*** to meet nutrient requirements of the beef cow

- One pile represents the ***maximum*** daily forage intake

Moisture and Temperature Hay Bale Probe

Make Hay right - Avoid Losses!

- Too dry – less than 15 percent
  - Dry matter and quality loss
- Too wet
  - Heating – Unavailable crude protein
  - Mold
  - Spontaneous combustion

Accurate testing of moisture and temperature determines whether it may become a concern

- Test moisture before harvest; keep testing moisture and temperature after baling for 3 - 4 weeks
- Know your “danger zones”
  - ✓ >20 % moisture without an organic acid preservative
  - ✓ > 125 °F: Begin monitoring temperature often

An aside –
Two cases of botulism reported in the last year

Principles for baleage success – pH <4.5

- Crop quality
- Moisture content
- Bale density
- Bale shape
- Time between baling and wrapping
- Bale binding
- Plastic
- Storage
- Feeding

Penn State Particle Separator

Too coarse, too fine, or just right?

- Check chop length from a representative field sample and adjust chopper as needed
- Correct chop length allows for:
  - Correct silo packing
  - Lactic acid formation
  - Proper rumen function

www.enasco.com

Plant and Pest Diagnostic Lab

Who's your "Crop Scene Investigator" ?

- A great resource for helping ID issues in the field
- Work with your local Purdue Extension Educator to ship in samples when needed
- Can help diagnose disease, insects, unknown plants, toxins, and more by utilizing a wide range of Purdue specialists

Unmanned Aerial Vehicle- Can have value

Opportunities

- Grazing pressure
- Species composition
- Plant disease concerns
- Soil fertility problems
- Insect pressure
- Check on water tank function
- Livestock well being

Other "Tools"? Questions?

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Forages have always been value added

- Production of meat, milk and fiber
- Soil conservation
- Improved water quality
- Improved soil health
- Carbon sequestration
- Wildlife habitat
- N source (N-fixation by legumes and scavenge)
- Outdoor recreation, landscaping, aesthetics
- Potential biofuel resource