UF | UNIVERSITY of FLORIDA
IFAS Extension

LIVING ON A FEW ACRES

IMPORTANT FACTORS

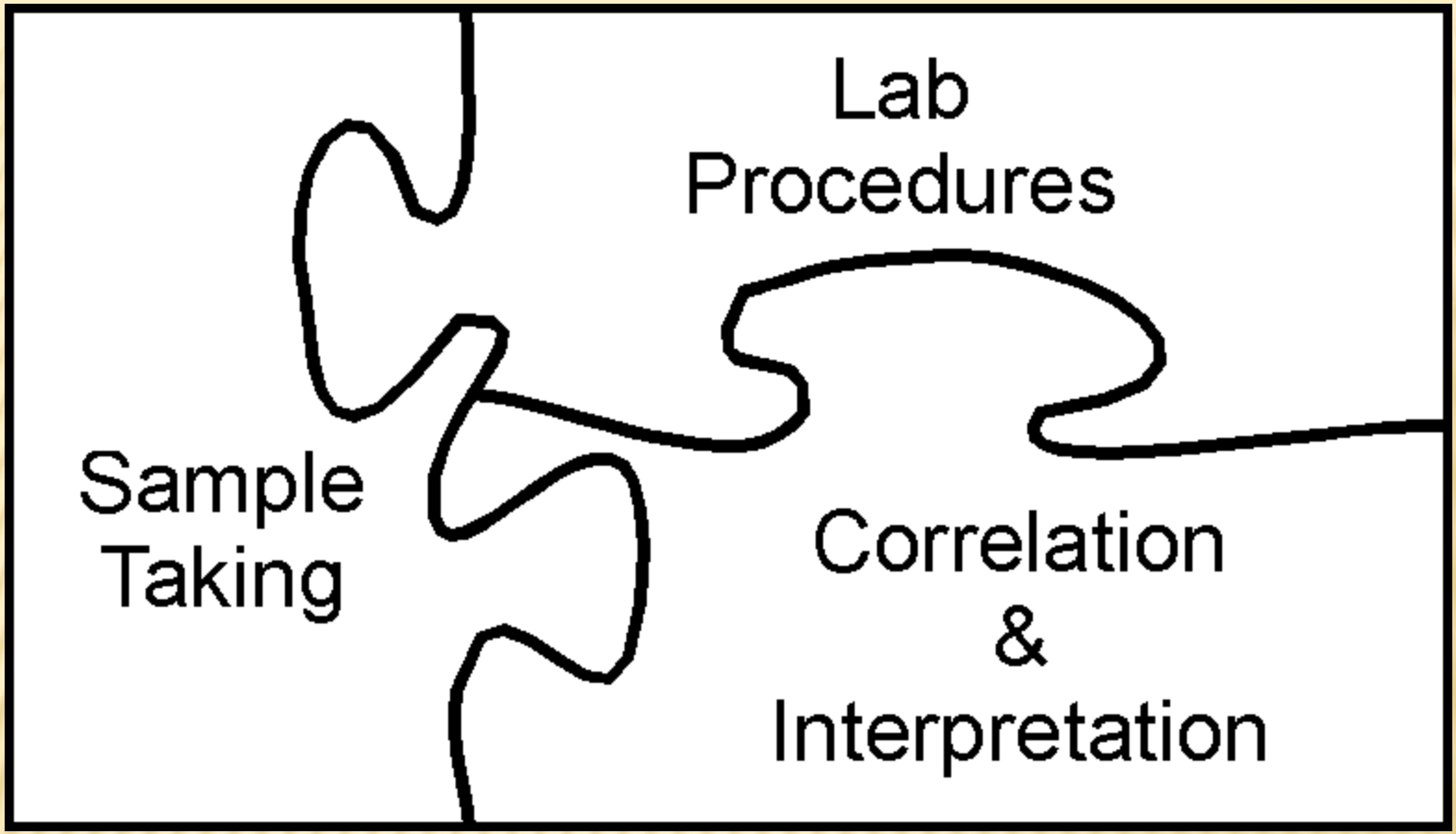
- Soil Testing
- Establishing a Pasture
- Types of Forages and Testing Hay
- Grazing Management
- Pasture Weeds and Insects

SOIL TESTING

- We can’t mange what we can’t measure. With an accurate soil test, a strategy can be made to solve even the most difficult of problems

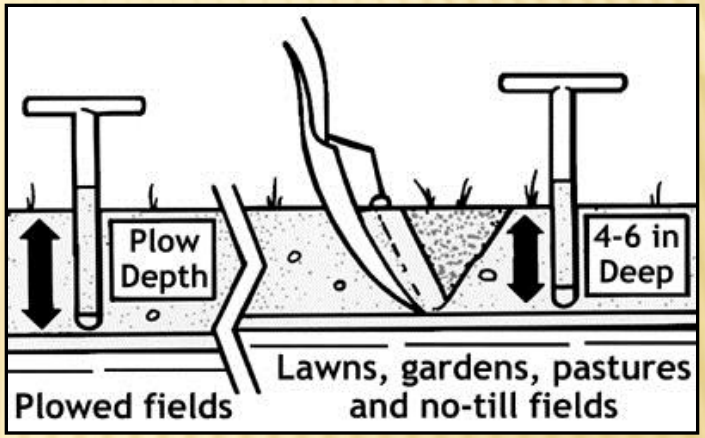
WHAT IS A SOIL TEST?

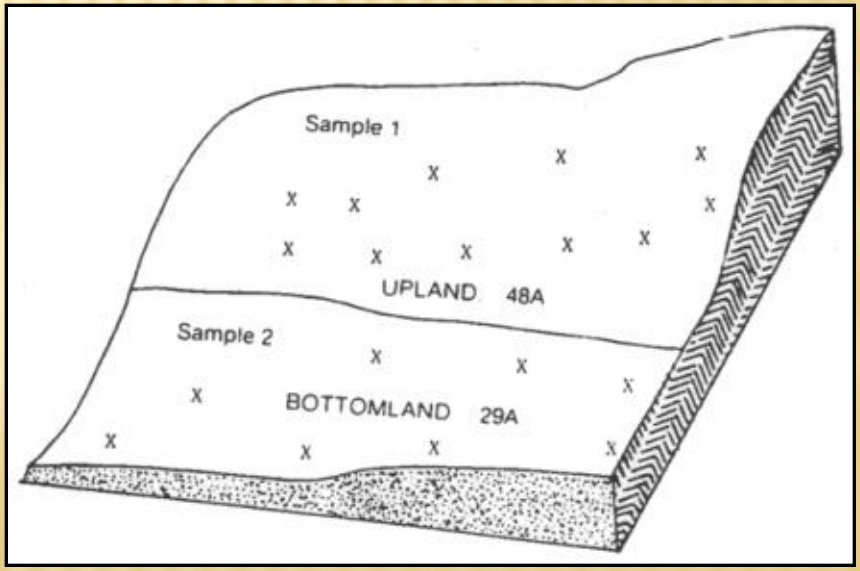
- A **soil test** is a process by which elements are chemically removed from the soil and measured for their "plant available" content within the sample. A soil test also measures soil pH.



THE SOIL TESTING PUZZLE IS MADE UP OF THREE PARTS.

TAKING THE SAMPLE





UF UNIVERSITY of FLORIDA
IFAS Extension

IFAS Analytical Services Laboratories Extension Soil Testing Laboratory

PO Box 110740 / Wallace Building 631, UF / Gainesville, FL 32611-0740
EMAIL: SOILSLAB@IFAS.UFL.EDU WEBSITE: SOILSLAB.IFAS.UFL.EDU

Producer Soil Test Information Sheet

Mailing Address (please print)

Note: This Lab Only Tests Samples from the State of Florida.

Name _____ Phone _____

Address _____

City _____ FL Zip _____

Date _____ E-Mail * _____

Direct any questions regarding this test or the interpretation of the results to your county Extension Agent.

* In order to expedite reporting of results; please provide an e-mail address if possible.

Fill in all requested information, using one line per sample and additional sheets for more than 10 samples.

Lab Use Only	Sample ID	County	Approx Acreage	Crop Code(s) See Page 2 (or back)	Analysis Code See Page 2 (or back)	Cost See Page 2 (or back)

NOTE SPECIAL PROBLEMS HERE:

Check_____ Money Order_____ Cash_____ Total_____

Please make checks and money order payable to UNIVERSITY OF FLORIDA.
SAMPLES WILL NOT BE PROCESSED WITHOUT PAYMENT.
Please enclose payment and this sheet in the same package as sample(s).
Do not send cash through the mail.

Important Information for Sample Collection and Submission

Before Sampling:

1. Develop a soil sampling plan of your field. Samples should represent the area being tested, so collect samples from areas that are of the same soil type, appearance, or cropping history. Sample problem areas separately, if needed. From this plan, count the number of samples you will collect.
2. Soil sample bags, addressed shipping boxes, and information sheets are available free from your county Cooperative Extension office. Obtain the materials you need to complete your sampling plan.

Collecting Samples:

1. Collect soil from 20 or more spots within each area, mixing these samples in a clean plastic bucket.
2. Sample from soil surface to depth of tillage, usually 0 to 6 inches. For pastures, sample from 0 to 4 inch depth.
3. Spread the composited material on clean paper or other suitable material to air dry. Do not send wet samples.
4. Mix the dry soil, and place about one pint of soil in a labeled sample bag.

Sending samples to the Extension Soil Testing Laboratory:

1. Enter each sample's identification on its sample bag and in the Soil Sample Identification# column. List each sample separately.
2. Lime and fertilizer recommendations are provided only if the crop code(s) is listed.
3. Include the analysis code for each desired test.
4. Enter costs from the Analysis Cost list found on page 2 of this form.
5. Sum the costs of all samples and analyses. Make check or money order payable to: University of Florida Checks written in any other name(s) will NOT be honored and returned and will cause avoidable delay in processing the samples.
6. Include the completed Producer Soil Test Information Sheet and the check or money order in the shipping box with the sample(s).

Test results:

A soil test report will be emailed / mailed to you within 5 to 10 days after your sample arrives at the Extension Soil Testing Laboratory. Contact your county Extension office if you have questions concerning the Soil Test Report.

Revised April 2009

Crop and Analysis Codes for Producer Soil Test Information Sheet

Standard fertilizer and lime recommendations based on your soil-test results will be supplied along with the test results if you indicate a crop code. Please write the appropriate crop codes on page 1 of this form. If your cropping situation is not in the list of codes below, routine soil tests may not be appropriate. In such instances, consult your local county agent before sending soil samples for testing.

Use special forms for requesting **Landscape & Vegetable Garden Soil Test (SL-136)**, the **Container Media Test (SL-134)**, or the **Pine Nursery Soil Test (SL-132)**.

AGRONOMIC CROPS

Crop Code	Field Crops
2	corn, nonirrigated
5	corn, irrigated
9	cotton
7	grain sorghum
8	oats for grain
10	peanuts
6	rye for grain
11	soybeans
13	sugarcane for syrup
12	tobacco (flue cured)
27	wheat for grain

Crop Code	Pasture and Forage Crops
23	alfalfa
26	cool season annual grasses (small grains and ryegrass)
22	cool season legumes or legume-grass mixtures (lupines, sweetclover, vetches and all true clovers (white, red, arrowleaf, crimson, subterranean)
32	hay or silage (perennial grass)
25	improved perennial grasses other than bahiagrass (bermuda, digit, star)
33	limpograss (Hemarthria)
28	perennial peanuts
14	summer forages (e.g., millet or sorghum)
21	warm season legumes or legume-grass mixtures (aeschynomene, alyceclover, desmodium, hairy indigo and other tropical legumes)

VEGETABLE CROPS

Please use the Landscape & Vegetable Garden Test Information Sheet (SL-136) for home gardens. Codes for particular vegetables will result in fertilizer recommendations for commercial vegetable production which are not appropriate for home vegetable gardens.

Crop Code	Crop Description	Crop Code	Crop Description
217	Beans Lima, Pole, Snap	227	Okra
228	Beet	223	Onion, Bulb
212	Broccoli	229	Onion, Bunching
212	Brussels Sprouts	204	Parsley
207	Cabbage Head or Chinese	216	Pea English, Snow or Southern
226	Carrot	201	Pepper Bell or Specialty
212	Cauliflower		
214	Celery	215	Potato, Irish
207	Collard	218	Potato, Sweet
220	Corn, Sweet	230	Pumpkin Squash
211	Cucumber	219	Radish
203	Eggplant	210	Spinach
225	Kale	230	Squash Summer or Winter
229	Leek		
209	Lettuce Crisphead, Endive, Escarole or Romaine	224	Strawberry
		200	Tomato Cherry or Slicing
205	Muskmelon	225	Turnip
225	Mustard	221	Watermelon

FRUIT CROPS

Except for pH and lime requirement, and in some cases P, soil tests are not used as a basis for fertilization of perennial fruit and nut crops in Florida. Program fertilization is practiced, and plant tissue testing is helpful in certain crops. Tissue testing is available from commercial labs. Consult with your county Extension agent about interpretation before taking samples.

Crop Code	Crop Description
67	blueberry (bearing)

ORNAMENTAL HORTICULTURE

Do not use this form for potting media used in containers. Use the Container Media Test (SL-134). For fertilization of plants in the landscape, use the Landscape & Vegetable Garden Test Information Sheet (SL-136).

Crop Code	Crop Description
601	commercial nursery growing azaleas, camellias, gardenias, hibiscus, or ixora in the ground
600	commercial woody ornamental nursery growing plants other than azaleas, camellias, gardenias, hibiscus or ixora in the ground
71	athletic field, golf green, tee, or fairway

Analysis Code	Analysis Name	Determinations Made	Analysis Cost
1	Standard Soil Fertility Test	pH, lime requirement, P, K, Ca, and Mg	$7.00
2*	Soil pH and Lime Requirement	pH and lime requirement	$3.00
3	Soil Micronutrients	Cu, Mn, Zn, and pH	$5.00
4	Organic Matter	percent organic matter	$10.00
5	Electrical Conductivity (Asoluble salts®)	conductivity in 1:2 soil:water	$2.00

* Included in Standard Soil Fertility Test. Do not request both codes 1 and 2 for the same soil sample.

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Nutrient Testing for Bahia Pastures

Note: The ESTL only tests samples from the State of Florida

Mailing Address (please print)

Name _____ Phone _____

Address _____

City _____ FL Zip _____

Date _____ E-Mail * _____

* In order to expedite reporting of results, please provide an e-mail address if possible.

- This form can be downloaded from our website
- Detailed information on this test can be obtained from SL128 accessed at edis.ifas.ufl.edu
- For further information contact your local county Extension Agent

Fill in all requested information, using one line per sample and additional sheets for more than 5 samples.

Lab Use only	County	Test(s) Requested (see below)	Crop Codes * (see below)	N option ** (see below)	Acreage	Sample ID For Soil	Sample ID For Leaf Tissue	Cost

* Crop Codes:
- 35 – Bahiagrass establishment of new plantings; Test 1 - standard soil test
- 36 – Bahiagrass, established with Low, Medium and High Nitrogen options – Test B1 Standard Soil AND Tissue Test (pH, lime requirement, P, K, Ca, Mg) OR Test 1, Standard Soil test (pH, lime requirement, K, Ca, Mg and P test value ONLY)

** N-Option:
- Indicate Low, Medium, or High N Option, when requesting tests for Crop Code 36.

Check _____ Money Order _____ Cash _____ Total _____

Please make checks payable to UNIVERSITY OF FLORIDA.
SAMPLES WILL NOT BE PROCESSED WITHOUT PAYMENT.
Please enclose payment and this sheet in the same package as sample(s)
Do not send cash through the mail.

Important Information for Soil Sample Collection and Submission

Before Sampling:

1. Develop a soil sampling plan of your field. Samples should represent the area being tested, so collect samples from areas that are of the same soil type, appearance, or cropping history. Sample problem areas separately, if needed. From this plan, count the number of samples you will collect.
2. Soil sample bags, addressed shipping boxes, and information sheets are available free from your county Cooperative Extension office. Obtain the materials you need to complete your sampling plan.

Collecting Samples:

1. Collect soil from 20 or more spots within each area, mixing these samples in a clean plastic bucket.
2. Sample from soil surface to depth of tillage, usually 0 to 6 inches. For pastures, sample from 0 to 4 inch depth.
3. Spread the composited material on clean paper or other suitable material to air dry. Do not send wet samples.
4. Mix the dry soil, and place about one pint of soil in a labeled sample bag.

Sending samples to the Extension Soil Testing Laboratory:

1. Enter each sample's identification on its sample bag and in the Soil Sample Identification column. List each sample separately.
2. Lime and fertilizer recommendations are provided only if the crop code(s) is listed.
3. Include the analysis code for each desired test.
4. Enter costs from the Analysis Cost list found on page 2 of this form.
5. Sum the costs of all samples and analyses. Make check or money order payable to: University of Florida. Checks written in any other name(s) will NOT be honored and returned and will cause avoidable delay in processing the samples.
6. Include the completed Producer Bahia Test Information Sheet and the check or money order in the shipping box with the sample(s).

Test results:

A soil test report will be emailed / mailed to you within 5 to 10 days after your sample arrives at the Extension Soil Testing Laboratory. Contact your county Extension office if you have questions concerning the Bahia Test Report.

Revised April 2009

Analysis Test Code	Analysis Name	Determinations Made	Analysis Cost
B1	Standard Soil and Tissue Test (for crop code 36)	pH, lime requirement, P, K, Ca, Mg	$15.00
1	Standard Soil Test (for crop code 36)	pH, lime requirement, K, Ca, Mg and P test value only	$7.00
1	Standard Soil Test (for crop code 35)	pH, lime requirement, P, K, Ca, Mg	$7.00
2	pH and Lime Requirement	pH and lime requirement	$3.00
3	Micronutrient Test	Cu, Mn, Zn	$5.00

Important Information for Bahiagrass (crop codes 35 and 36)

There are two types of tests available for Bahiagrass pastures in Florida (see Table above for details)

Phosphorus Testing and Recommendation for Bahiagrass

- Soil tests alone are not adequate for determining P fertilization needs of Bahiagrass.
- A tissue and soil test must be submitted together to determine P fertilization needs.
- Phosphorus should not be applied if tissue P is at or above 0.15% even if soil tests Very Low or Low for P.
- If P recommendations are not desired and the producer only is interested in K, Mg, Ca levels and pH then a Standard Producer Soil Test will apply. This WILL NOT include P fertilizer recommendations.

Bahiagrass testing for new establishment plantings

- For crop code 35, only 1, 2 and 3 can be requested.
- Decisions concerning liming and N fertilization of bahiagrass pastures are very sensitive to cattle productivity and prices.

How To Take, Prepare, and Submit Plant Tissue Samples (for Analysis B1)

1. Ensure that each sample contains at least a generous handful of plant material (around half a gallon).
2. Do not sample leaves contaminated with soil or sprays. If all tissue is dusty or spray contaminated, wash leaves gently with flowing distilled water.
3. Do not sample diseased, insect, or mechanically damaged plant tissue.
4. Place tissue samples directly into a clean paper or cloth bag or envelope. Do not use plastic containers. If the plant tissue is wet or succulent, allow plant material to air dry for at least one day, before mailing.
5. When sampling suspected nutrient-deficient plants, two samples are recommended; one sample from normal plants, and another sample from abnormal plants.
6. When sampling, the plant part and plant maturity are important factors. Be sure to collect the proper plant part at the recommended time. A general rule of thumb is to sample the youngest, fully mature leaves during the growth cycle, or just prior to full set.
7. Please do not provide any roots along with the sample.

Test A ($3.00)

pH

Lime requirement

Test B ($7.00)

Test A +

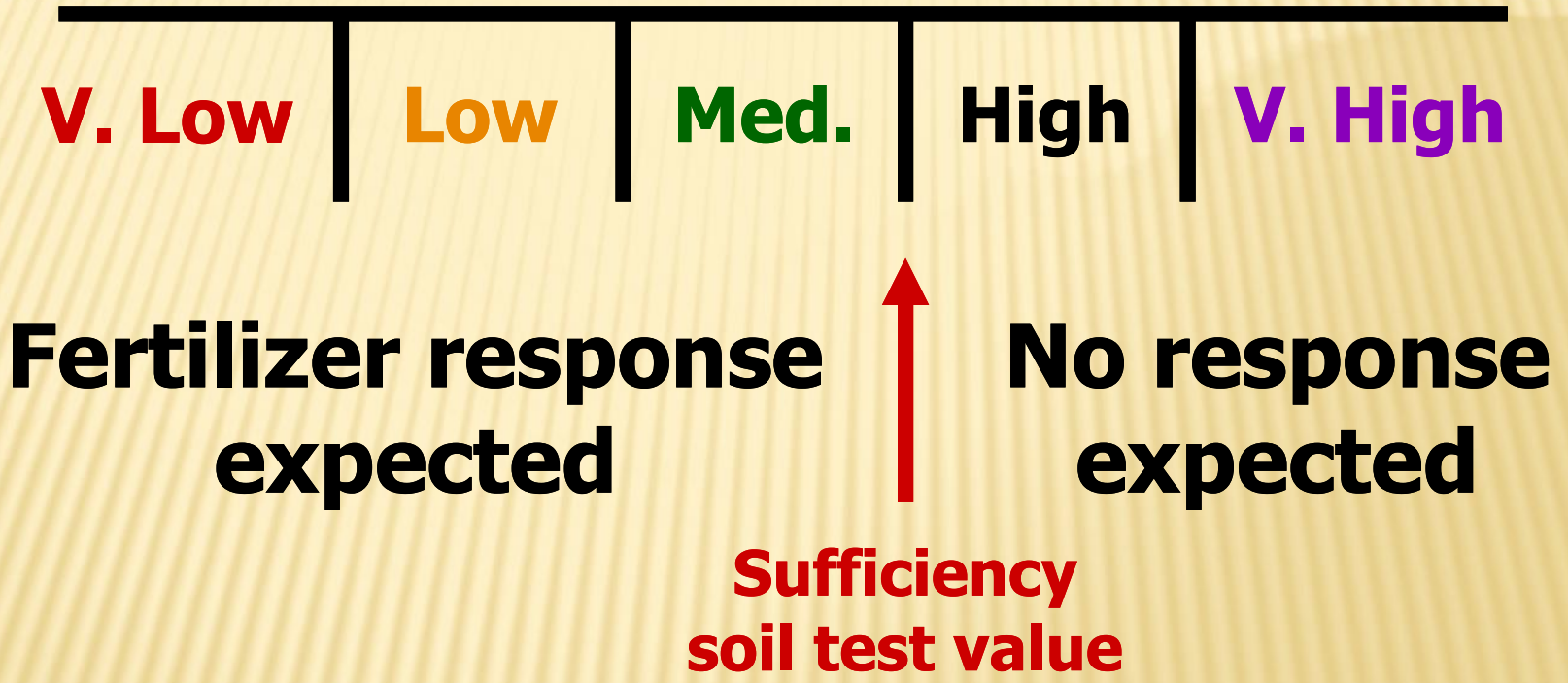
P, K, Mg

Photo Credit: Amy Shober, UF-IFAS

THE RESULTS

- The quantity of available nutrients in the sample determines the amount of fertilizer that is recommended. These analyses indicate whether lime is needed and, if so, how much to apply.

SOIL INTERPRETATION



BEST MANAGEMENT PRACTICES (BMPS)

- BMPs are practices or combinations of practices that, based on research, field-testing, and expert review, are determined to be the most effective and practicable means for improving water quality

- www.floridaagwaterpolicy.com

BEST MANAGEMENT PRACTICES

ESTABLISHING A PASTURE

- Soil testing and applying appropriate lime/fertilizers
- Tillage and weed management
- Use only certified seed
- Good seed bed preparation
- Timing of planting

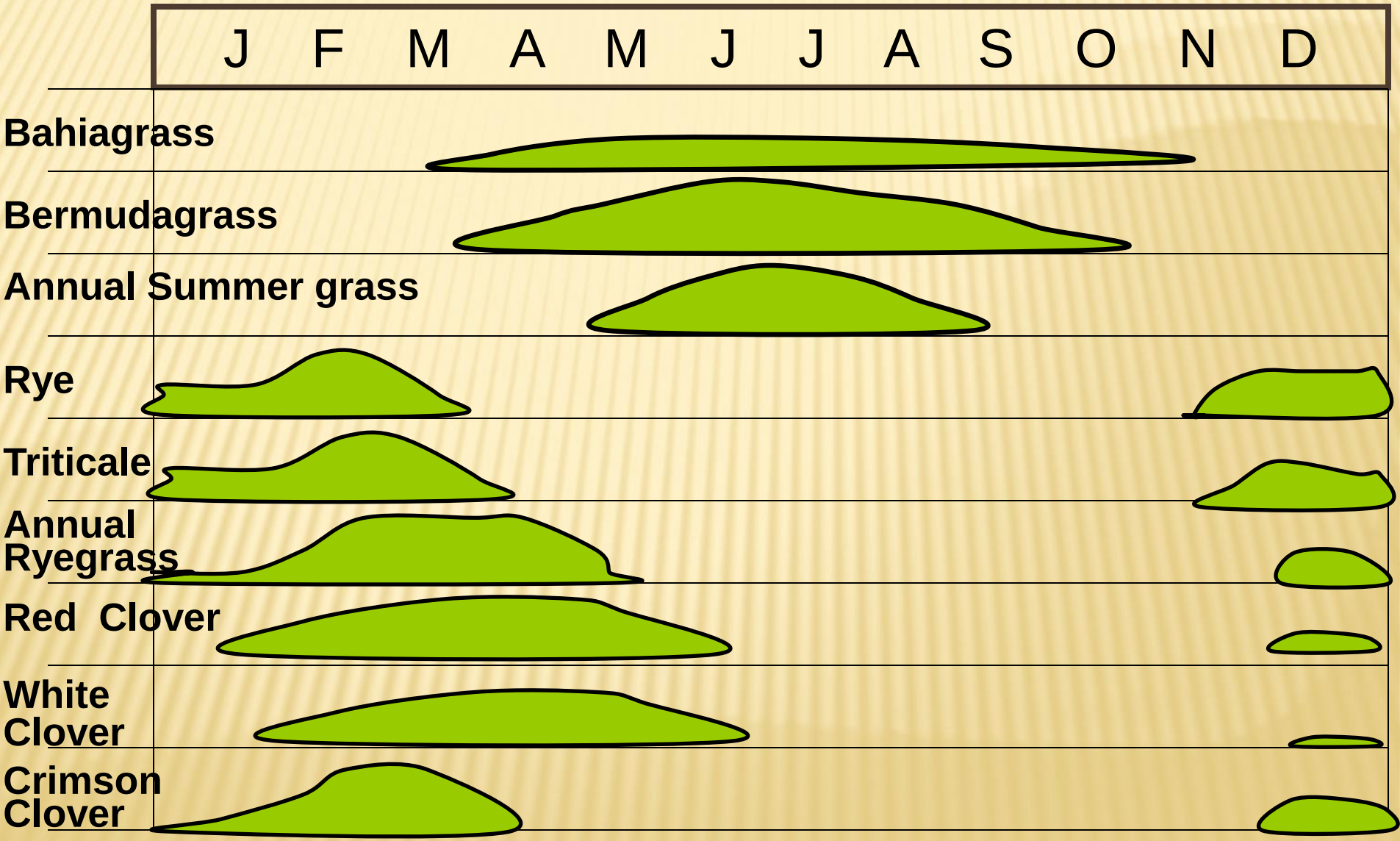
Pensacola bahiagrass; 20 kg ha^{-1};
7 and 60 d after planting

Pensacola bahiagrass; 60 kg ha^{-1};
7 and 60 d after planting

PASTURE FORAGES

- There are different types of forages based on the season.
- Summer Perennial Grasses: Bahiagrass and Bermudagrass
- Summer Annual Grasses: Pearl Millet
- Winter Annual Grasses: Rye, Oats, Wheat, Triticale, and Ryegrass
- Legumes

FORAGE AVAILABILITY IN FLORIDA BY MONTHS



SUMMER PERENNIAL GRASSES

Bahiagrass

- Is a widely adapted, productive, and persistent grass.
- Tolerates heavy grazing, and most soil types.
- General freedom from severe disease and insect infestation
- Good drought tolerance
- Adequate forage quality
- Low to moderate fertility requirement

BAHIAGRASS

- Pensacola

  winter hardy, less fertile soils and not well managed

- Argentine

  wider and darker green leaves, later growth but more forage

- Tifton-9

  less tolerance to close grazing, produces 25% more forage than pensacola

- TifQuik

  quicker stand and essentially same as Tifton-9

- UF-Rita (new)

  more cold tolerant and grow longer in fall

SUMMER PERENNIAL GRASSES

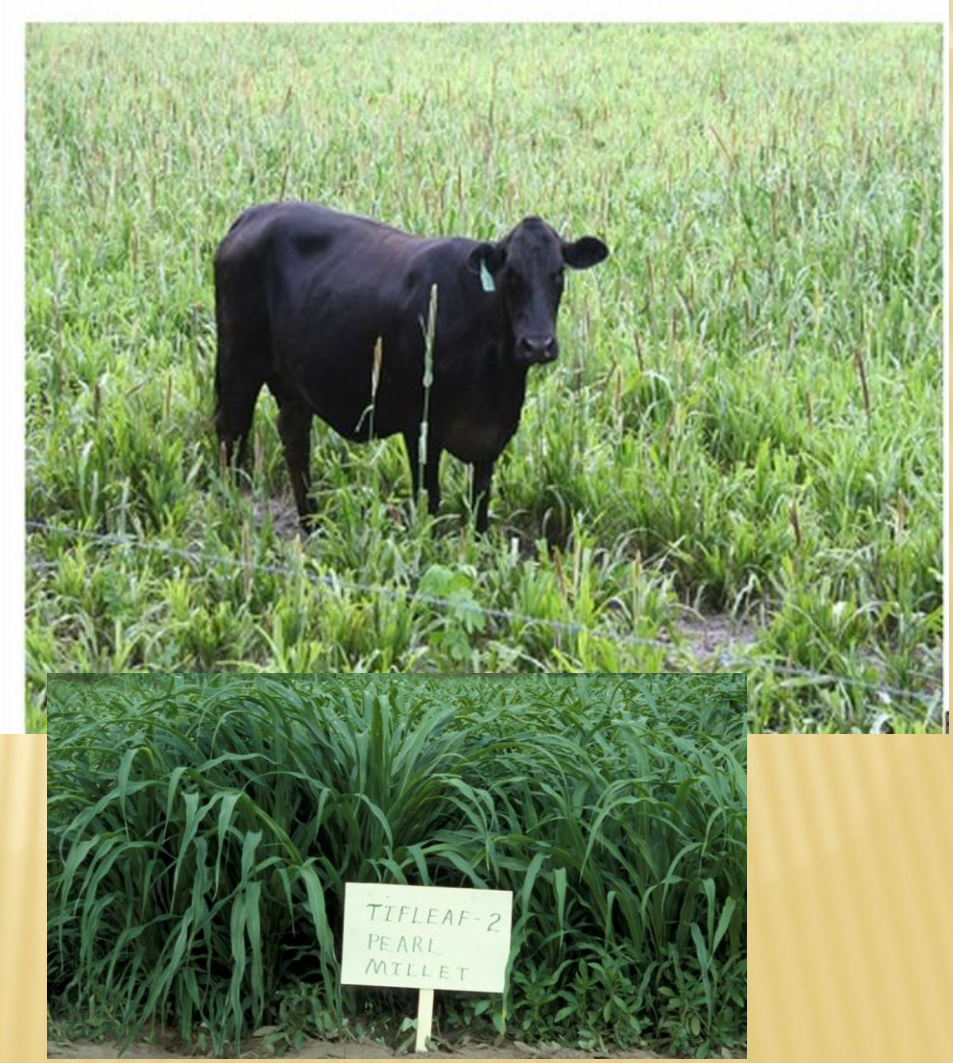
Bermudagrass

- Can be used for pasture and are well suited for hay production.
- Should be grown on fertile, well-drained soil.
- High fertilization requirements.

SUMMER ANNUAL GRASSES

Pearl Millet (Tifleaf)

- High nutritive-value
- Can be used as an emergency forage that regularly performs well as an economical one year forage crop.



WINTER ANNUAL GRASSES

- Rye
- Ryegrass
- Oat
- Triticale
- Wheat

- Provide valuable winter and spring grazing
- High-quality forages
- Substitute for energy and protein supplements

WINTER ANNUAL GRASSES

Rye

- This small grain is widely used for grazing. It is very cold tolerant and usually produces the most forage.

WINTER ANNUAL GRASSES

Ryegrass

- Valuable winter and spring crop, mainly used in moist soils.
- Produces high quality-spring hay crop.
- The peak season of growth is later than that of rye, and a **mixture of rye and ryegrass is widely used by cattlemen since it extends the grazing period of either forage planted alone.**

FORAGE QUALITY

- Bahiagrass – CP 4-13, TDN 42-56
- Bermudagrass – CP 7-16, TDN 38-54
- Ryegrass – CP 12-16, TDN 63-68
- Pearl Millet – CP 8-12, TDN 50-58

Quality	Grass		Legume		Silage[1]	
	Percent (Dry Matter Basis)					
	TDN[2]	CP	TDN[2]	CP	TDN[2]	CP
Excellent	>58	>12	>64	>18	>65	>8
Good	55 – 57	10 – 11	60 – 63	16 – 17	60 – 64	7 – 8
Fair	52 – 54	8 – 9	57 – 59	14 – 15	55 – 59	6 – 7
Poor	<52	<8	<57	<14	<55	<6

1 Silage values are based on moisture different moisture levels. Excellent (<70%), Good (71 – 74%), Fair (75 – 79%) and Poor (>80%).

2 Determine hay quality by TDN rating. If hay does not meet CP requirements or it is less than 93% dry matter, or if silage does not meet either CP or moisture requirement for quality, lower one grade.

Source: MSUCares.com

TESTING HAY

- Helps with determining the amount of protein and energy supplements to meet animal requirements
- Hay Quality Classification

	% DM Analyzed[1]			% DM Calculated[1]			
Quality Standards	CP2	ADF	NDF	TDN	DDM	DMI3	RFV
Prime	>19	<31	<40	>60	>65	>3.0	<151
1	17 – 19	31 – 55	40 – 46	59 – 56	62 – 65	3.0 – 2.6	151 – 125
2	14 – 16	36 – 40	47 – 53	55 – 52	58 – 61	2.5 – 2.3	124 – 103
3	11 – 13	41 – 42	54 – 60	52 – 51	56 – 57	2.2 – 2.0	102 – 87
4	8 – 10	43 – 45	61 – 65	50 – 49	53 – 55	1.9 – 1.8	86 – 75
5	<8	>45	>65	<49	< 53	< 1.8	<75

[1] Values in the columns are expressed in terms of percent dry matter, except for RFV and DMI.

[2] Abbreviations over columns are: CP = crude protein; ADF = acid detergent fiber; NDF = neutral detergent fiber; TDN = total digestible nutrient; DDM = digestible dry matter; RFV = relative feed value; DMI = dry mater intake.

[3] Based on percent of body weight (% BW).

Source: Coppock, 1997.

SUPPLEMENTAL FEEDING OF HAY

- Hay provides extra nutrients that cannot be provided from forages.
- When it comes to small farms on a few acres, it's economically better to purchase hay rather then grow your own.

GRAZING MANAGEMENT

- Grazing management affects pasture yield, nutritive value, and stand longevity.
- Questions to ask?

1. Stocking rate or height of grazing
2. Continuous use or rotational

- Goal is to match ability of pasture to meet animal nutritional requirements.

GRAZING MANAGEMENT

- Bahiagrass kept at 2 - 6 inches will keep CP at 10% and 56% TDN

Animal Unit (AU) = 1000 lbs Live Weight/ 2.5 acres of pasture

- Beef cattle = 1 hd/ 2.5 acres
- Horses = 1 horse/2.5 acres
- Goats = 6-7 does/ 2.0 acres
- Sheep= 6-7 ewes/2.0 acres

Minimum stubble heights for long term persistence of major forages in Florida based on use (hay or grazing).

	Hay	Rotational Grazing	Continuous Grazing
		----------INCHES----------	
Warm-season perennials			
Bahiagrass	2	3	5
Bermudagrass hybrids (Coastal)	3	3	6
Bermudagrass (Tifton 85)	5	5	8
Stargrass	5	5	8
Limpograss	6	10	16
Warm-season annual			
Pearl millet		6	10
Cool-season grasses			
Annual ryegrass	3	3	4
Rye/oat	3	3	5
Wheat/Triticale	5	5	6
Legumes			
Perennial peanut	4	4	6
Clovers	3	3	5
White clover	1	1	3

Yoana Newman, UF/IFAS Forage Extension Specialist

WEED CONTROL

Weeds are always a problem in Florida, so know the first signs and prevention!

WEED CONTROL

What are the options?

- Spray
- Fertilize
- Spray and fertilize
- Mow
- Do nothing

WEED CONTROL METHODS

MECHANICAL WEED CONTROL

- Mow weeds before they start to seed.
- Pull weeds by hand, especially around bodies of water to protect water quality.

CHEMICAL WEED CONTROL

- Herbicides may be used as long as it is applied in the correct amounts and time of year.
- Use an EPA-registered herbicide.
- Keep herbicides away from water sources.

SPRAY OR MOW?

- I would only mow if it is for small areas.
- Large-scale mowing will cost more than it gives.

What about mowing?

$3 - $20

$8 - $15

MOWING

Take home point

Do you really want to spend $8 - $15/A for inconsistent weed control?

DO I SPRAY OR FERTILIZE FIRST?

- Spray first.
- Control existing weeds.
- Begin soil-test based lime and fertilizer program.

OPTIONS

Herbicide	Rate	Cost	Weeds
2,4-D	1 qt	$3.75	Annual broadleaf
metsulfuron	0.5 oz	$6	Many broadleaf – bermuda only
Weedmaster	1 qt	$8	Annual broadleaf
GrazonNext	1 qt	$9	Thistle, pigweed, dogfennel, etc
Cleanwave + 2,4-D	1 pt + 1qt	$11	Big dogfennel
Remedy	1 qt	$20	blackberry

BIOLOGICAL WEED CONTROL

- One of the best methods of control is to plant a long-term perennial grass.
- Once the grass has established, it will compete with weeds and help prevent them from establishing.

TYPES OF WEEDS

ANNUALS/BIANNUAL

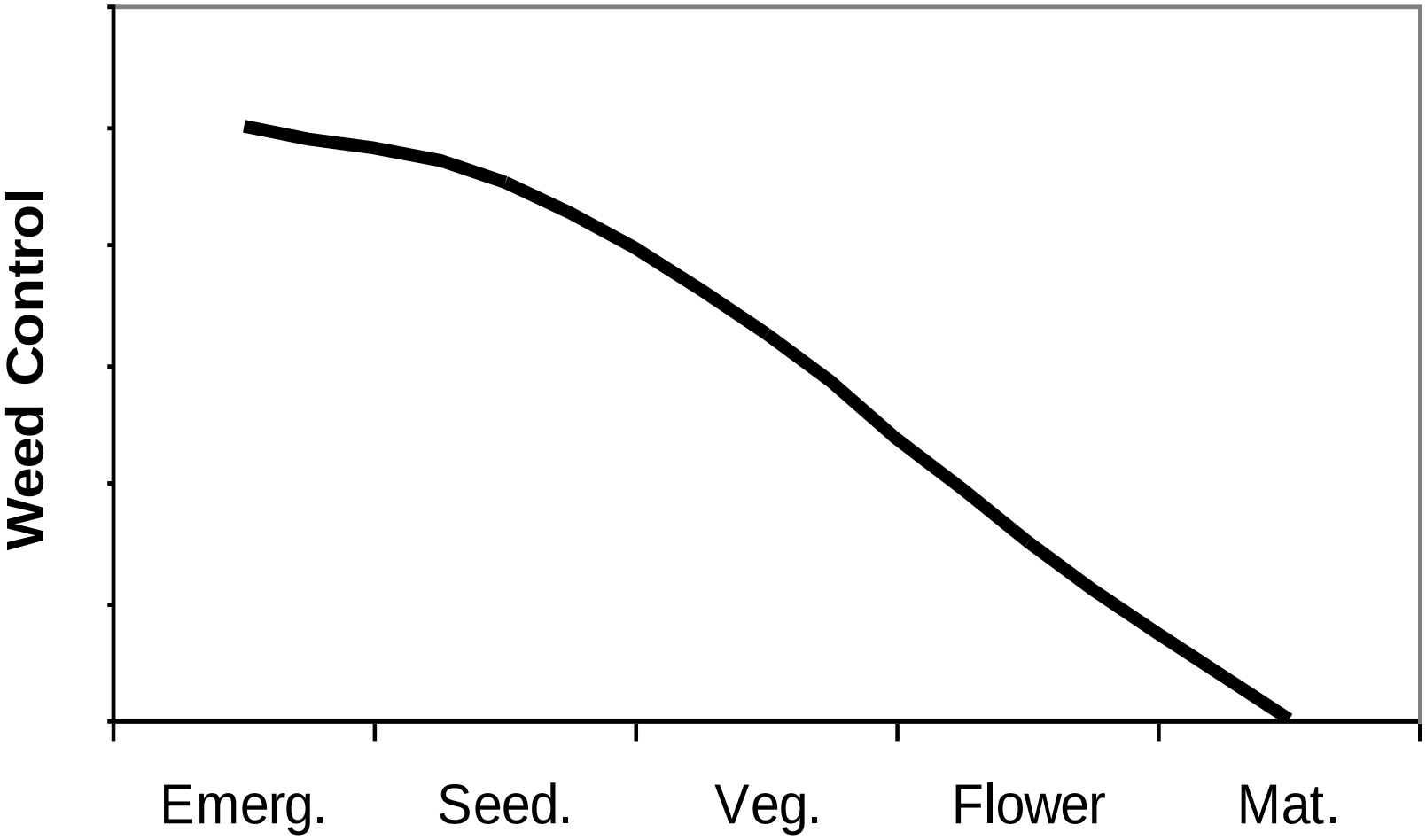
- Annuals are weeds that occur once a year
- Biannual weeds live longer than one year, but usually less than two years.

PERENNIALS

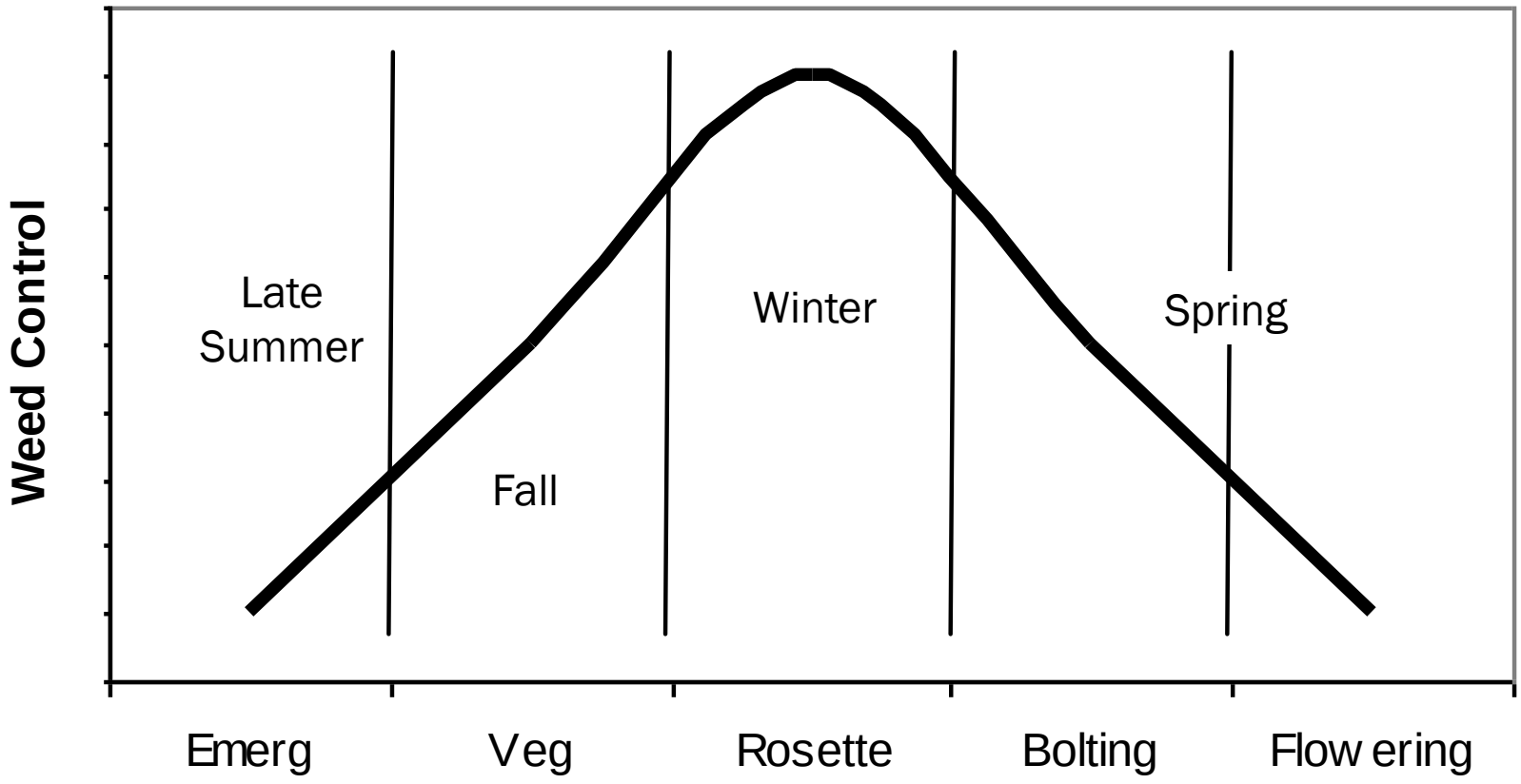
- Perennial weeds are plants that grow indefinitely from year to year.
- These weeds are the most aggressive and will do more damage to your land.

Nutsedge, a perennial weed.
Photo courtesy of David Goldberg

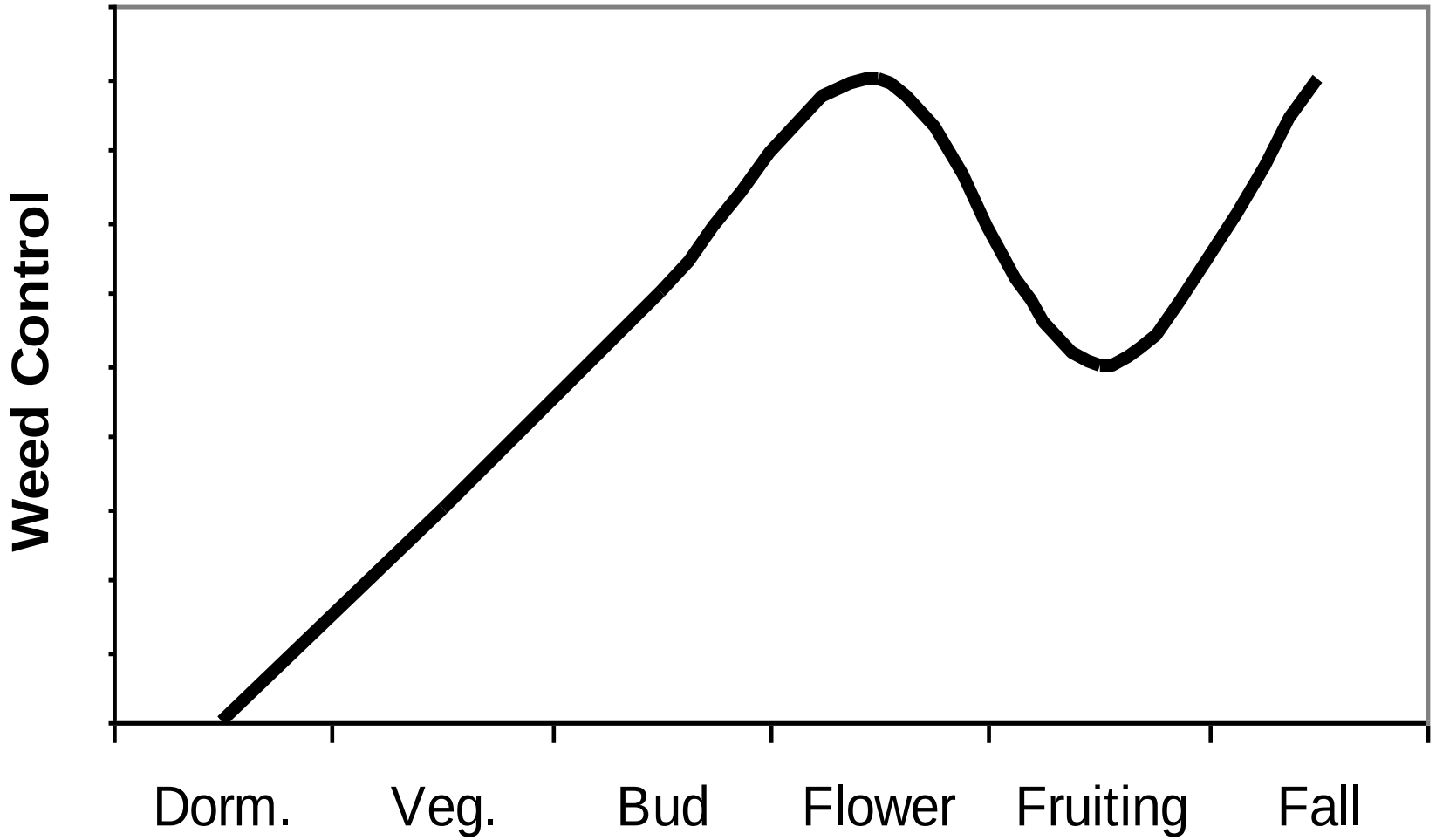
Control of Annual Weeds



Control of Biennial Weeds



Control of Perennial Weeds



PASTURE WEEDS

- When having pasture lands, there are a few common weeds that occur.
- Dogfennel
- Prickly Pear
- Florida Pusley
- Thistle
- Blackberry

DOGFENNEL

- a flowering, perennial, wetland plant.

Treatment with Pasturegard 3 pt/A ($23/A) more than doubled grass production. Is it worth it to you?

Brent Sellers, Univ. of Florida

DOGFENNEL CONTROL

Herbicide	% control 6 WAT	$/A
Cleanwave (14oz) + 2,4-D (3pt)	90	12
Weedmaster (2 pt)	50	8
Weedmaster (3 pt)	80	12
Weedmaster (4 pt)	90	16

PRICKLY PEAR

- Is a native cactus to Florida.
- Do not mow! These reproduce veg. and the mowed pads can root and colonize.

PRICKLY PEAR CONTROL

- Herbicides
- Remedy Ultra (20%) + basal/diesel fuel (80%) – spray one at a time.
- Pasturegard is same as Remedy
- 2,4-D is not effective
- Cleanwave 50oz/ac with surfactant , slow control

AFTER

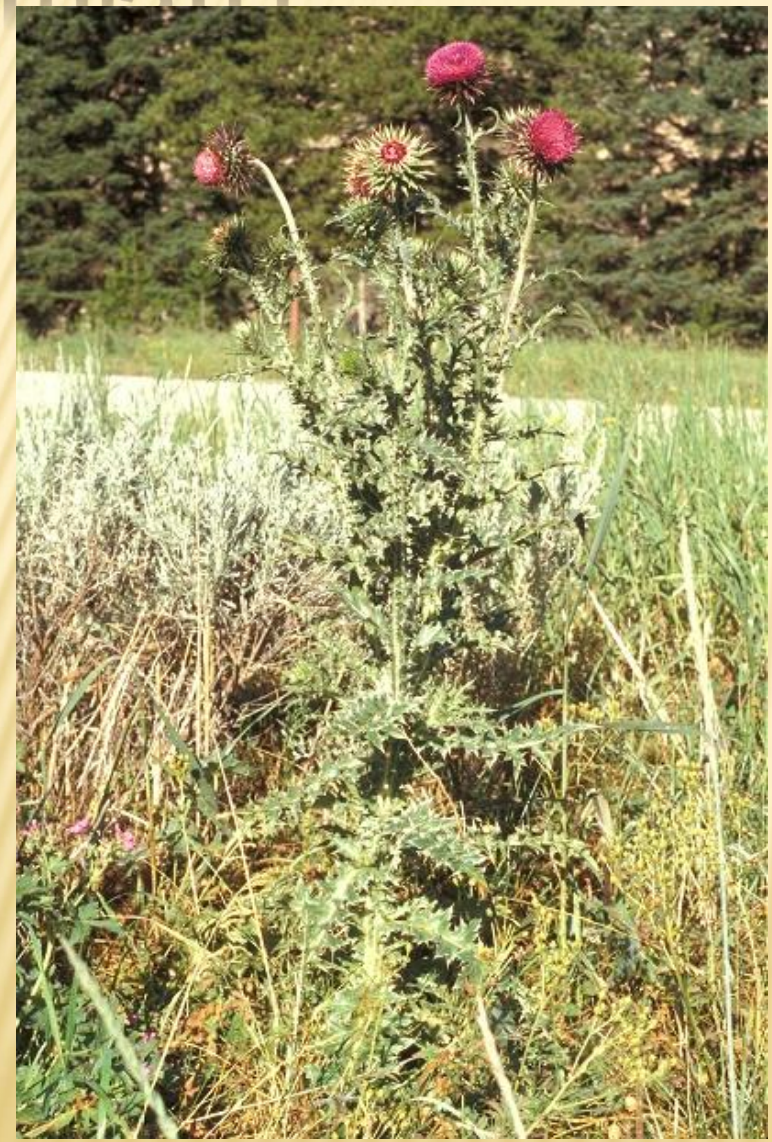
FLORIDA PUSLEY

Florida Pusley is a common and troublesome weed found in pastures, cultivated fields, waste areas, and roadsides throughout Florida. Plants grow prostrate (creeping along the ground) and have hairy stems that grow to lengths of up to 30 inches

CONTROL OF FLORIDA PUSLEY

Herbicide	Rate	Pusley Control (%)	
		2 weeks	8 weeks
Cleanwave	14 oz/A	14	18
Weedmaster	3 pt/A	56	70
Pasturegard	3 pt/A	48	84
Forefront	2 pt/A	55	90
Forefront + CW	2 pt + 14 oz	73	99
Forefront + PG	2 pt + 1 pt	90	100

THISTLE



If left uncontrolled, thick thistle stands can reduce grazing. A single thistle plant can produce at least 4,000 seeds, which increases the chance for higher thistle populations in the pasture the following year.

Brent Sellers and Jason Ferrell[2]

>90 % THISTLE CONTROL

Growth Stage	Herbicide	$/A
Rosette	2,4-D	$6
Bolting	Weedmaster	$12
Flowering	Milestone	$20

BLACKBERRY (BUSH-TYPE)

BLACKBERRY CONTROL

- Remedy - 1 qt/A
- Pasturegard - 2 qt/A
- Cimarron - 0.5 oz/A (injury to Bahia)
- Telar - 1.0 oz/A

- Do not mow within 1 yr of treatment
- Blackberry is most sensitive when blooming

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IFAS Extension

SS-AGR-08

Weed Management in Pastures and Rangeland - 2011[1]

B.A. Sellers and J.A. Ferrell[2]

Weeds in pastures and rangeland cost ranchers in excess of $180 million annually in Florida by reducing forage yield, lowering forage quality, and causing animal injury through toxicity or specialized plant organs (thorns and spines). Effective weed management begins with a healthy pasture. Weeds are seldom a serious problem in a well managed, vigorously growing pasture. Good pasture management involves the proper choice of the forage species and variety, an adequate fertility program, controlled grazing management, and pest management (weeds, insects and diseases).

If pasture health declines, weeds will exploit the situation and become established. Bare ground is the perfect environment for establishment of weeds. Once established, weeds must be controlled with mechanical or chemical methods. However, unless the pasture-management problem that caused forage decline is corrected, the grass will not reestablish and weeds will re-infest the area.

Integrated weed management is both an economically and environmentally sound approach to weed management. An integrated approach involves scouting, prevention, and control (biological, cultural, mechanical, and chemical) in a coordinated plan.

Scouting

Scouting pastures is the foundation of a sound weed management program, but is often overlooked. Scouting involves routinely walking or driving through pastures and identifying weeds. This defines the scope of the problem and allows the best management practices to be implemented in a timely fashion. The number of weeds, the species present, and their locations are important. Note the dominant species as well as uncommon or perennial weeds. The management strategies adopted should focus on controlling the dominant species, while preventing the spread of less common species. If not managed proactively, the less common weeds in a pasture may become future dominant weed problems.

Proper identification of weeds is the first step toward weed control. A good example is knowing the difference between tropical soda apple (TSA) and red soda apple (cockroach berry). Of the two, only TSA is a troublesome invasive weed that must be controlled. However, some have occasionally confused the two species and allowed TSA to go uncontrolled. Unfortunately, this costly mistake results in TSA spreading throughout the ranch and potentially onto neighboring ranches. If there are questions concerning weed identification, contact your local county Extension office for assistance.

1. This document is SS-AGR-08, one of a series of the Agronomy Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date, January 2000. Revised March 2011. Visit the EDIS website at http://edis.ifas.ufl.edu.

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PASTURE INTEGRATED PEST MANAGEMENT

- IPM is a sustainable approach to managing pests through biological, cultural, physical and chemical tools in a way that minimizes risks to the community.
- IPM Field Day on August 25 (Carl Allison)

- IPM, Tropical Soda Apple, Fire Ants, Mole Crickets, Flies, Armyworm control, and general insects and pest