ALFALFA PRODUCTION IN THE SOUTH

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Alfalfa

Adaptation	Well-drained soils, if soil is fertile and management is good. Best if irrigated.
Lifespan	4-7 years in LVM & Pied; 3-5 years in Coastal Plain
Yield	4-6 tons/A (dry); 5-8 tons/A (irrigated)
Soil Considerations	Soil pH $\geq$ 6.5 (4-6 in. depth) Subsoil pH $\geq$ 5.5 (down to 4 ft.) Well-drained, deep, and fertile
Bloat Potential	High
Uses	1) Hay, 2) Silage, 3) Grazing
Establishment	Drill: 20-25 lbs/A Broadcast: 22-25 lbs/A
Varieties	Alfagraze 600 RR (S), Bulldog 505 (S), Bulldog 805 (CP)
Comments	Very valuable ($140-200^{++} per ton). Highest quality forage.

Courtesy of D. Hancock

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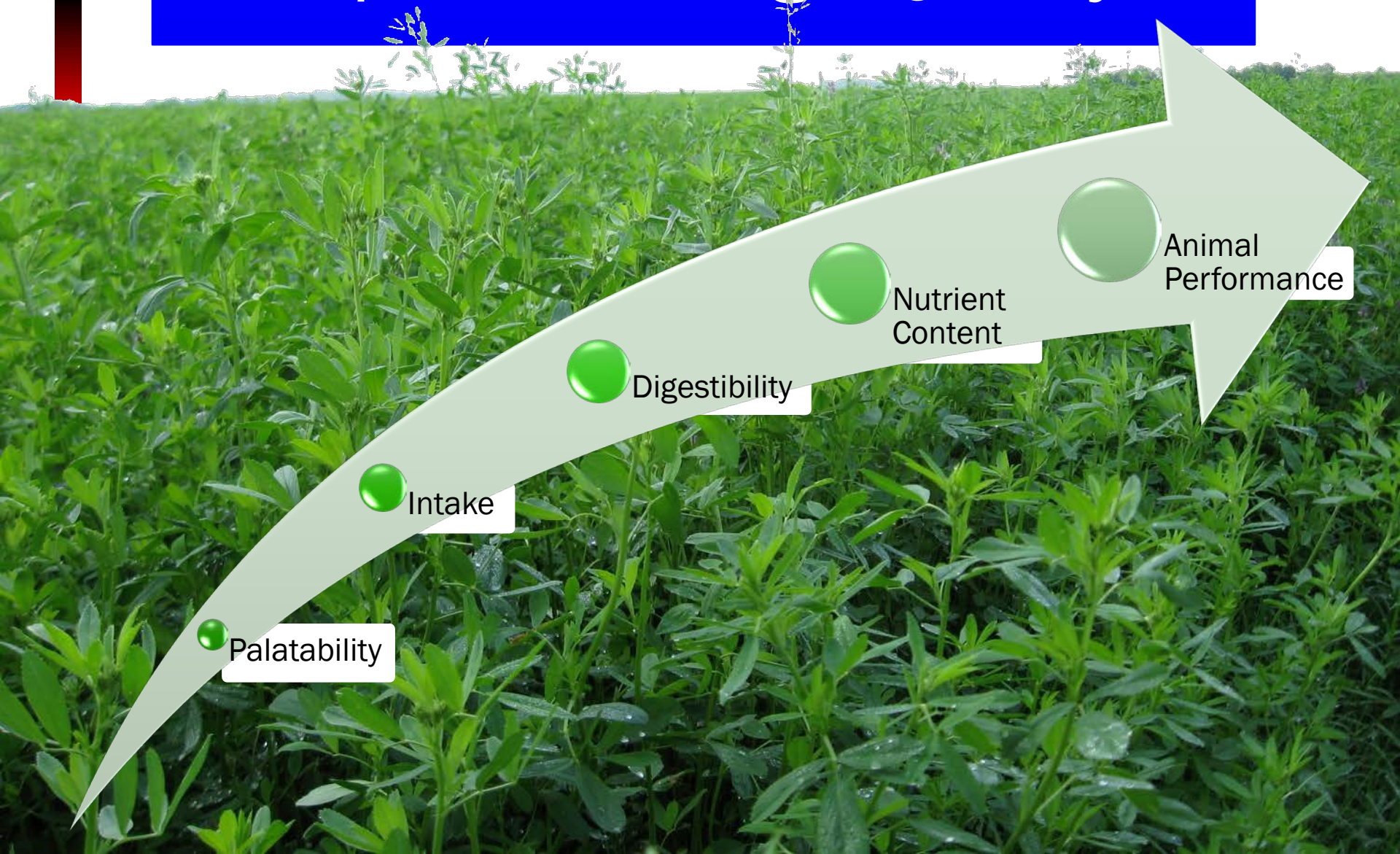
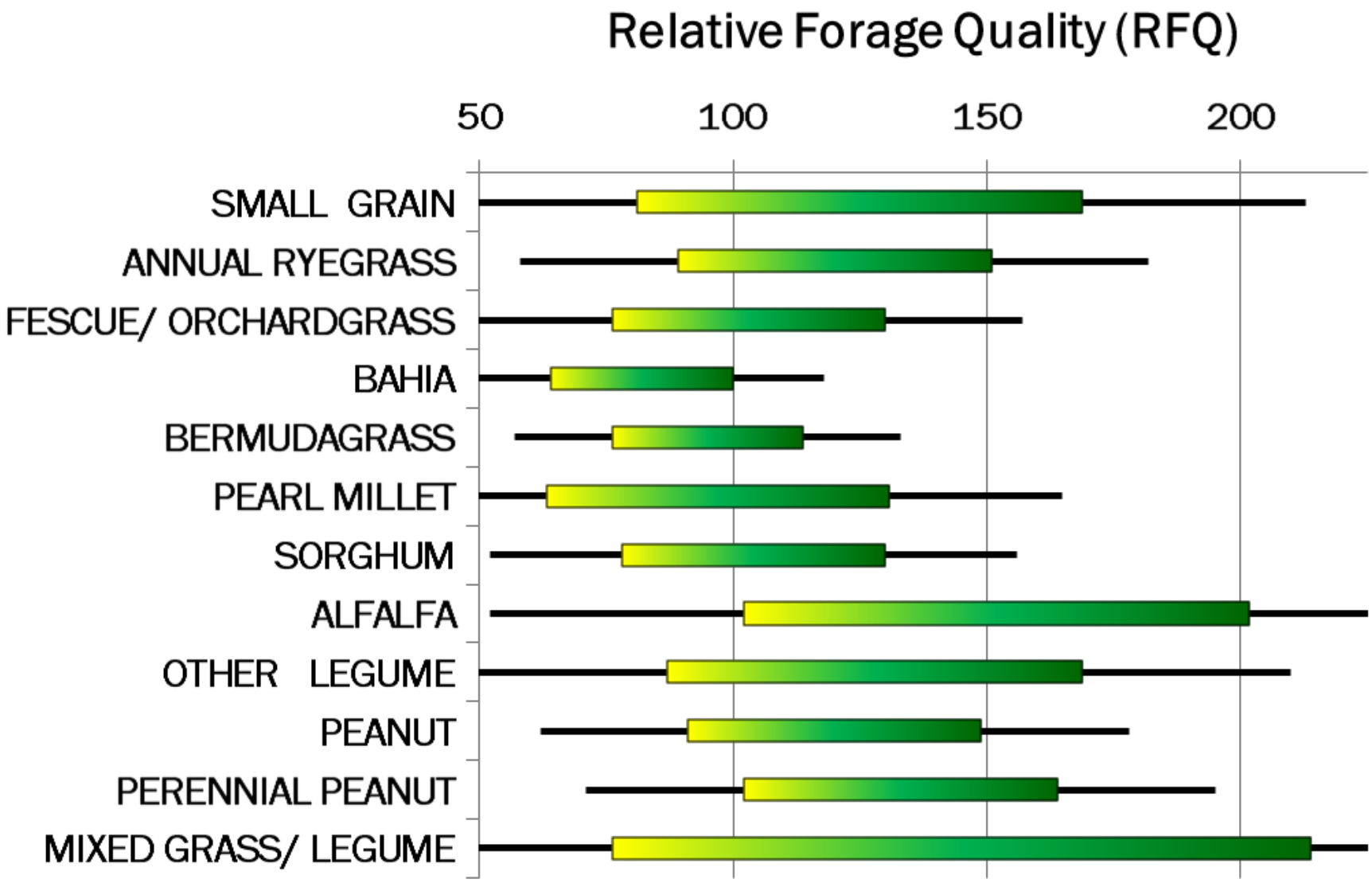
WHAT ABOUT INTERSEEDING?

Adding Legumes to Grass Improves Forage Quality!





* Typical expected range and extent of what is commonly low or high for a species for RFQ in samples of various forage species submitted to the UGA FEW Lab.

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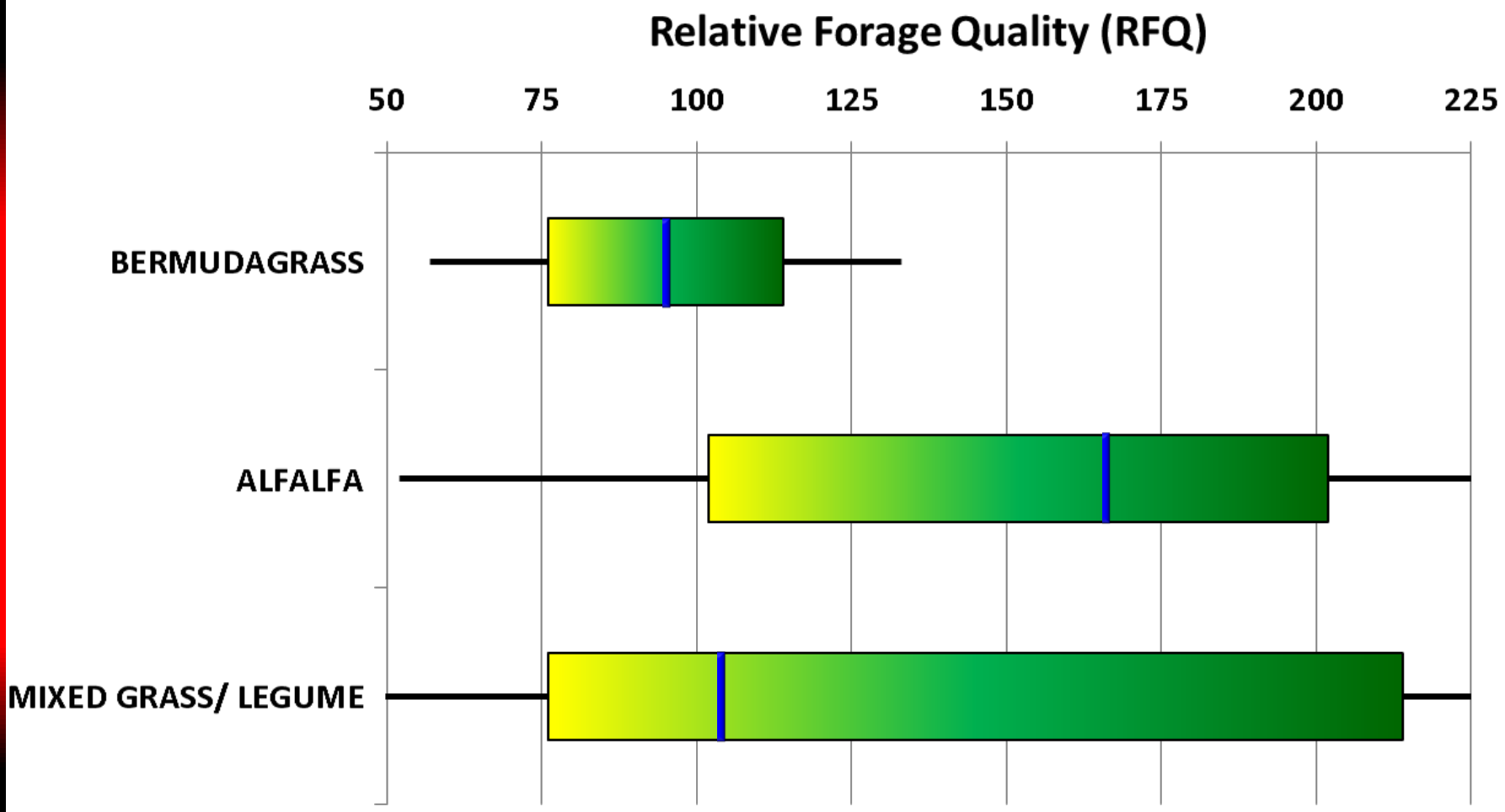

* Typical expected range and extent of what is commonly low or high for a species for RFQ in samples of various forage species submitted to the UGA FEW Lab.

**Blue line represents mean average of species from samples submitted (2009-2015)

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Forage Quality Parameters for Selected Forage Crops

Crop	Maturity	CP	TDN	NDF	ADF
Bermudagrass					
	4 weeks old	10-12	52-58	33-38	63-68
	8 weeks old	6-8	45-50	40-45	70-75
Alfalfa					
	Bud	22-26	64-67	28-32	38-47
	Early Flower	18-22	64-64	32-36	42-50
	Mid Bloom	14-18	58-61	36-40	46-55
	Full Bloom	9-13	50-57	41-43	56-60

Source: Adapted from J.C. Henning and G.D. Lacefield, University of Kentucky

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Why Interseed Alfalfa into Bermudagrass?

1. Grow your own nitrogen
2. Increase the quality of your forage (+30 or more RFQ points)
3. Makes excellent supplemental feed and/or cash hay crop
4. Growing with bermudagrass allows alfalfa to dry faster and be harvested clean
5. Prevents stem maggot damage.
6. If all else fails, you still have bermudagrass.

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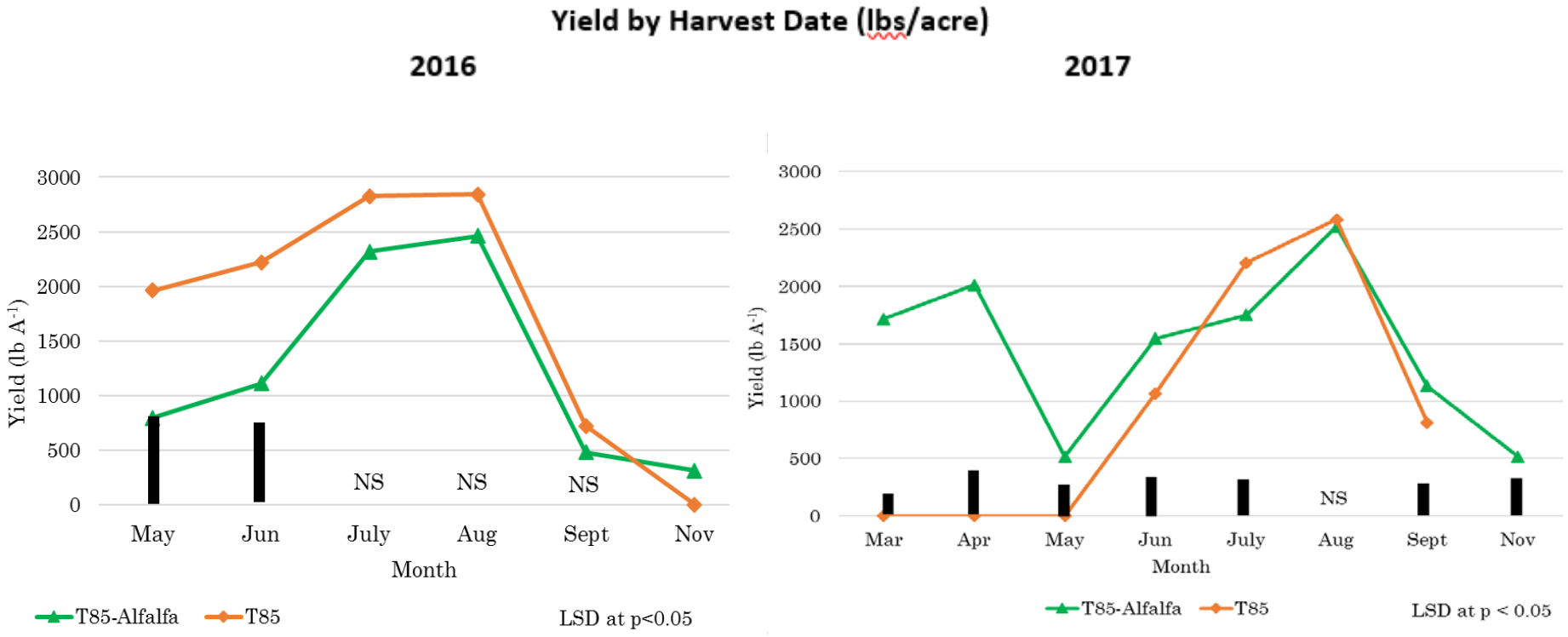
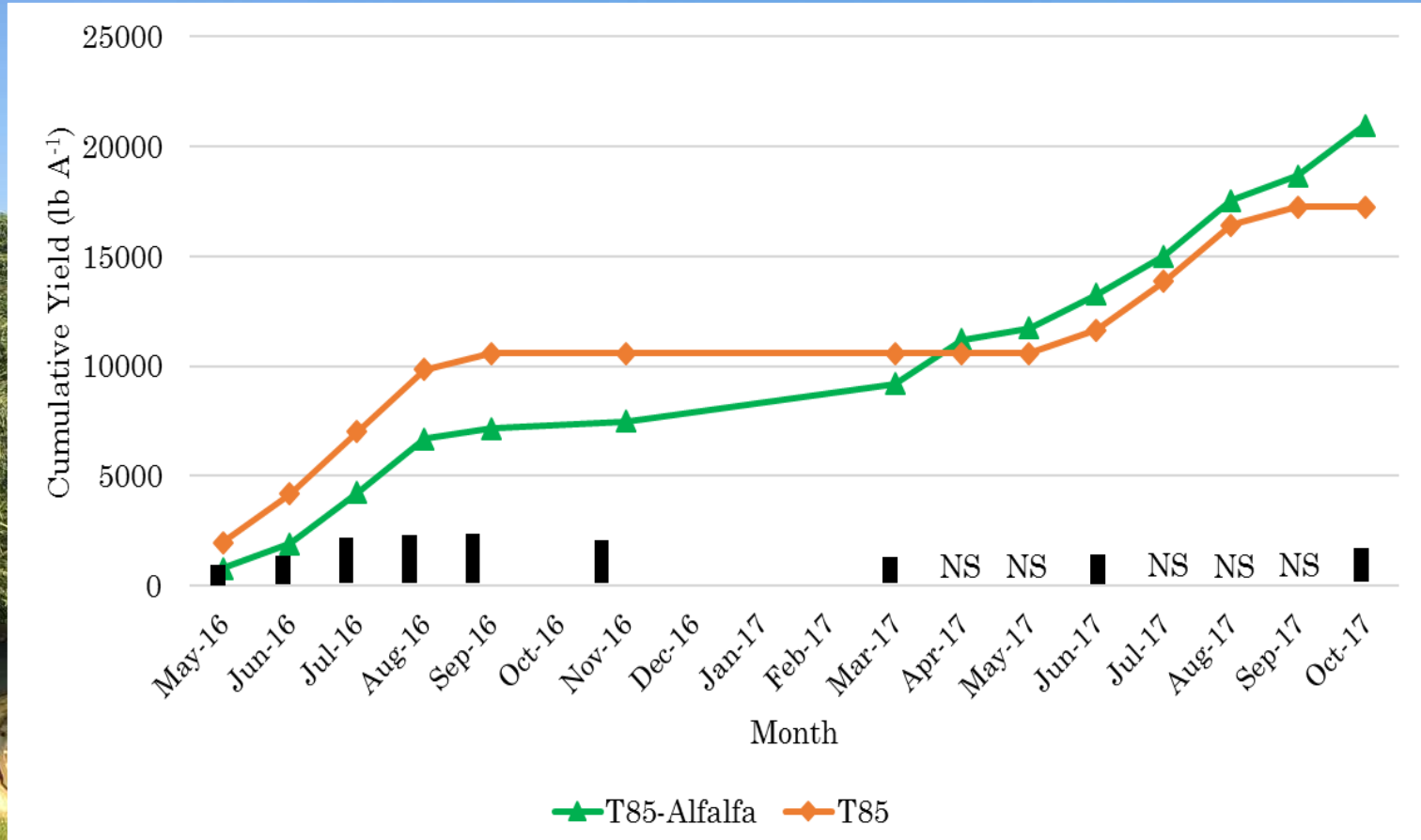
A winning combination:

Yield by Harvest Date



Yield (kg ha^{-1}) for each harvest of the 2016 and 2017 growing season. Bars represent a least significant difference (LSD) at α = 0.05

Cumulative Yield



Cumulative yield (lb A^{-1}) throughout the study period.
Bars represent a least significant difference (LSD) at $\alpha = 0.05$

HOW TO'S AND WHAT NOT'S

Where to Start:

- Soil Test
- SOIL Test
- SOIL TEST!!

- Target pH 6.5 or greater
- Subsoil (1 ft depth) pH should be greater than 5.5
- High P and High K
- Don’t forget the Micronutrients!
  - *Mo and B*

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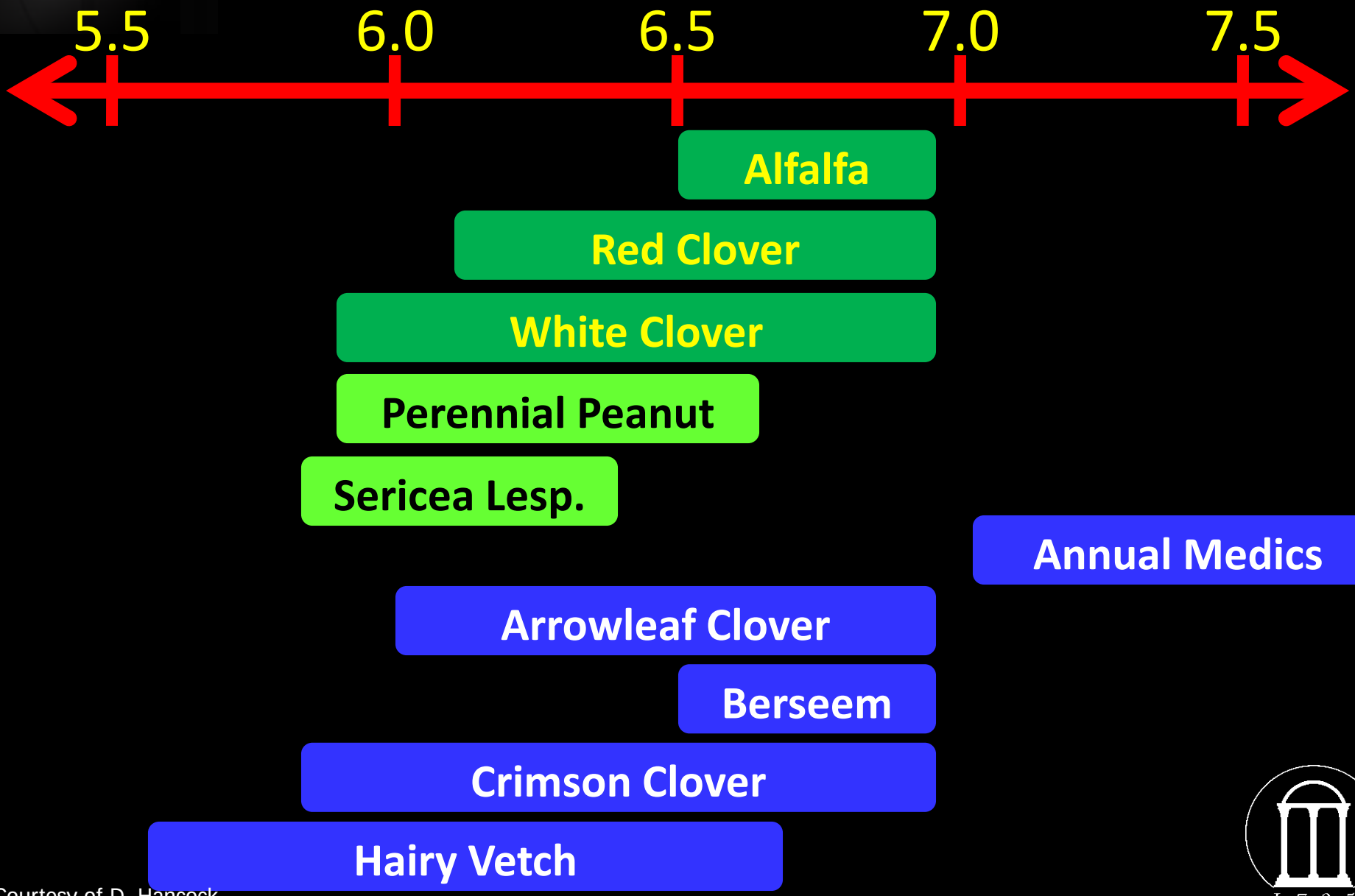
Poorly Drained Soil is a Major Challenge for Alfalfa
Picture credit: www.pioneer.com

Legumes and Their Optimum Soil pH



Courtesy of D. Hancock

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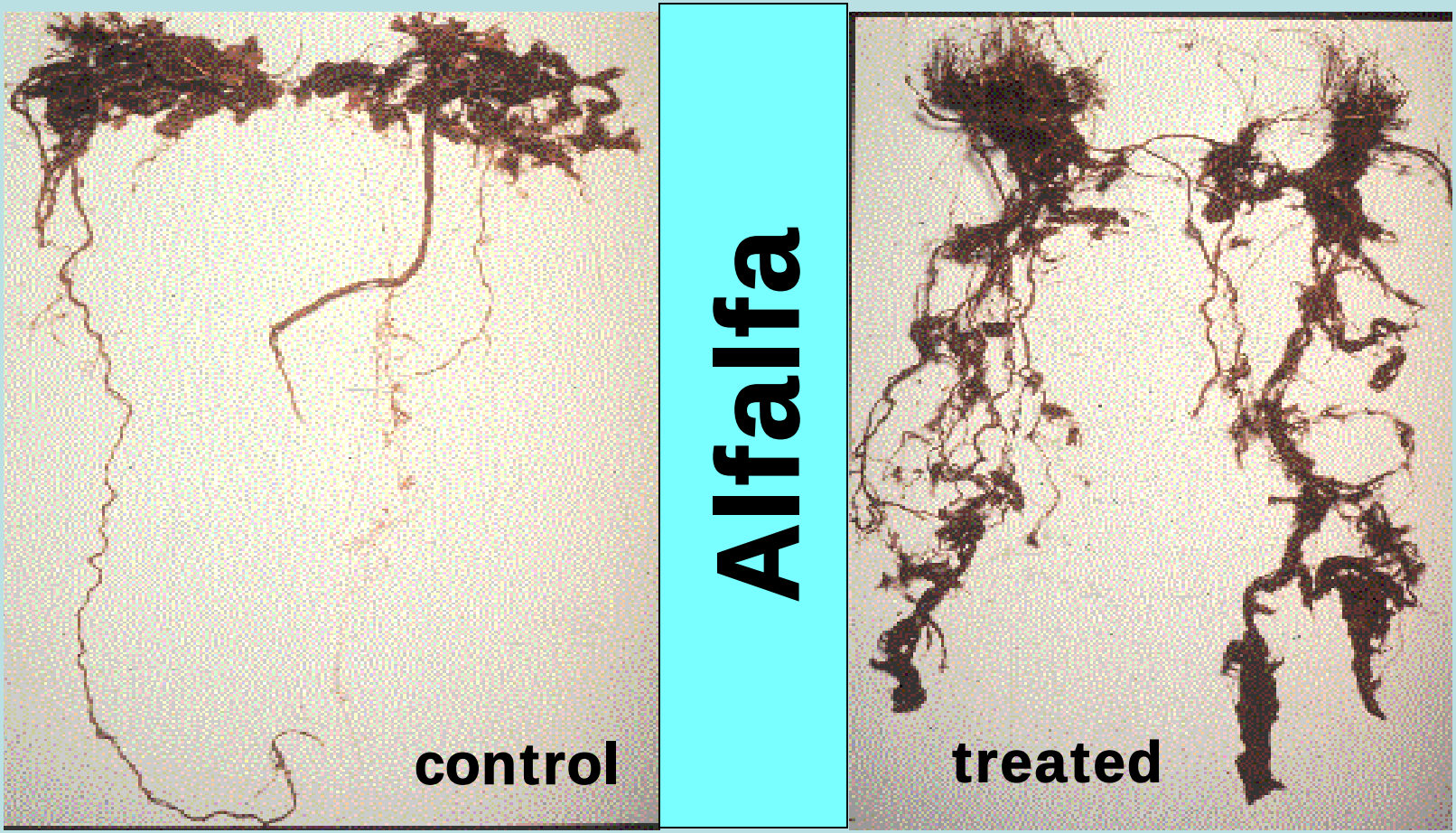
Aluminum Toxicity – Low Soil pH



Weed Control – starts at the beginning!

Manage weeds during establishment!

- Control what you can when you can!
- Determine if treatment is warranted
- If using RR technology, Glyphosate is your friend!
- If conventional establishment – there are options – however they may damage alfalfa for a period of time
- Even harder in a mix!
- After established – pre-emergent technologies are warranted!

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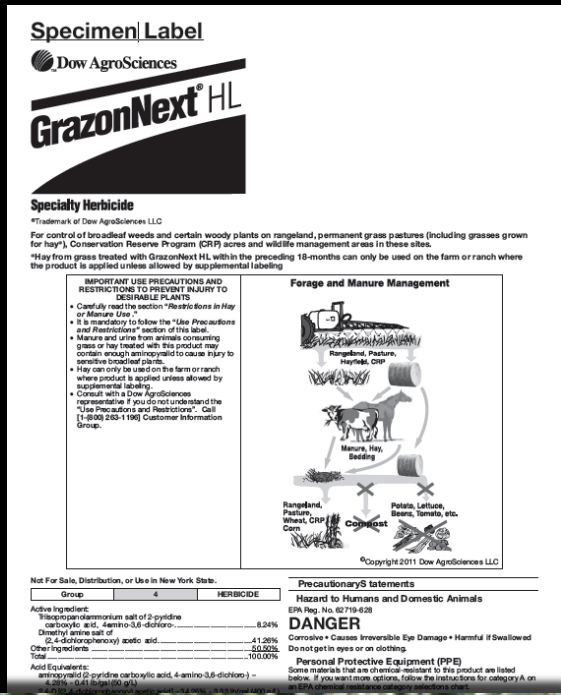
Avoid Areas Treated with Residual Herbicides

- Aminopyralid (GrazonNext, Chaparral, etc.) or picloram (Grazon P+D, Surmount, Tordon, etc.) requires bioassay
  - Delay planting until at least 10-12 months after application (usually)
- Sulfonylureas (Cimarron, metsulfuron, Pastora, Outrider, etc.)
  - Delay planting by 4-12 mos.+
- Dicamba (Banvel, Clarity, Weedmaster, etc.)
  - Delay planting by 4 months+



Specimen Label

Dow AgroSciences

GrazonNext® HL

Specialty Herbicide

*Trademark of Dow AgroSciences LLC

For control of broadleaf weeds and certain woody plants on rangeland, permanent grass pastures (including grasses grown for hay*), Conservation Reserve Program (CRP) acres and wildlife management areas in these sites.

*Hay from grass treated with GrazonNext HL within the preceding 18-months can only be used on the farm or ranch where the product is applied unless allowed by supplemental labeling

IMPORTANT USE PRECAUTIONS AND RESTRICTIONS TO PREVENT INJURY TO DESIRABLE PLANTS

- Carefully read the section "*Restrictions in Hay or Manure Use*."
- It is mandatory to follow the "*Use Precautions and Restrictions*" section of this label.
- Manure and urine from animals consuming grass or hay treated with this product may contain enough aminopyralid to cause injury to sensitive broadleaf plants.
- Hay can only be used on the farm or ranch where product is applied unless allowed by supplemental labeling.
- Consult with a Dow AgroSciences representative if you do not understand the "Use Precautions and Restrictions". Call [1-(800) 263-1196] Customer Information Group.

Forage and Manure Management

Not For Sale, Distribution, or Use in New York State.

Group	4	HERBICIDE

Active Ingredient:
Triisopropanolammonium salt of 2-pyridine carboxylic acid, 4-amino-3,6-dichloro-..... 8.24%
Dimethyl amine salt of (2,4-dichlorophenoxy) acetic acid..... 41.26%
Other Ingredients..... 50.50%
Total..... 100.00%

Acid Equivalents:
aminopyralid (2-pyridine carboxylic acid, 4-amino-3,6-dichloro-) – 4.25% + 0.41 lb/gal (50 g/L)

Precautionary Statements

Hazard to Humans and Domestic Animals

EPA Reg. No. 62719-628

DANGER

Corrosive • Causes Irreversible Eye Damage • Harmful If Swallowed

Do not get in eyes or on clothing.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical resistance category selections chart.

Courtesy of D. Hancock

When to Plant:

- Plant at the right time of the year, when conditions are favorable!
- Recommended Fall Planting
  - *Northern GA – Sept. 15 – Oct. 15*
  - *Southern GA – Oct. 15 – Nov. 15*
- When there is plenty of soil moisture and temperatures have dropped into favorable range of planting for success!

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- Plant with a No- Till drill
  - ***No Deeper*** *than ½ inch*
  - *1/4th is better!*
- In a suppressed sod?
  - *Yes - bermudgrass*
  - *More of a challenge with cool season species*
- Seeding Rate:
  - *Drill: 20-25 lbs/A*
  - *Interseeding?*
  - *What about Row Spacing?*

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Inoculate Legume Seed!

The population of the specific Rhizobium (Rhizobium meliloti) is likely to be very low in the soil.

- Inoculate seed with fresh inoculant before seeding.
  - *1 bag of inoculant per bag of seed.*

- Alfalfa seed often comes pre-inoculated.
  - *coated with an inert material, usually lime,*
  - *saves time and helps to ensure inoculation*
  - *check expiration date*

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What now?

- After emergence – Spray with insecticide to control insect pests

PESKY PASTURE PESTS IN ALFALFA

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Alfalfa Weevil

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Alfalfa Weevil

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Potato Leafhopper

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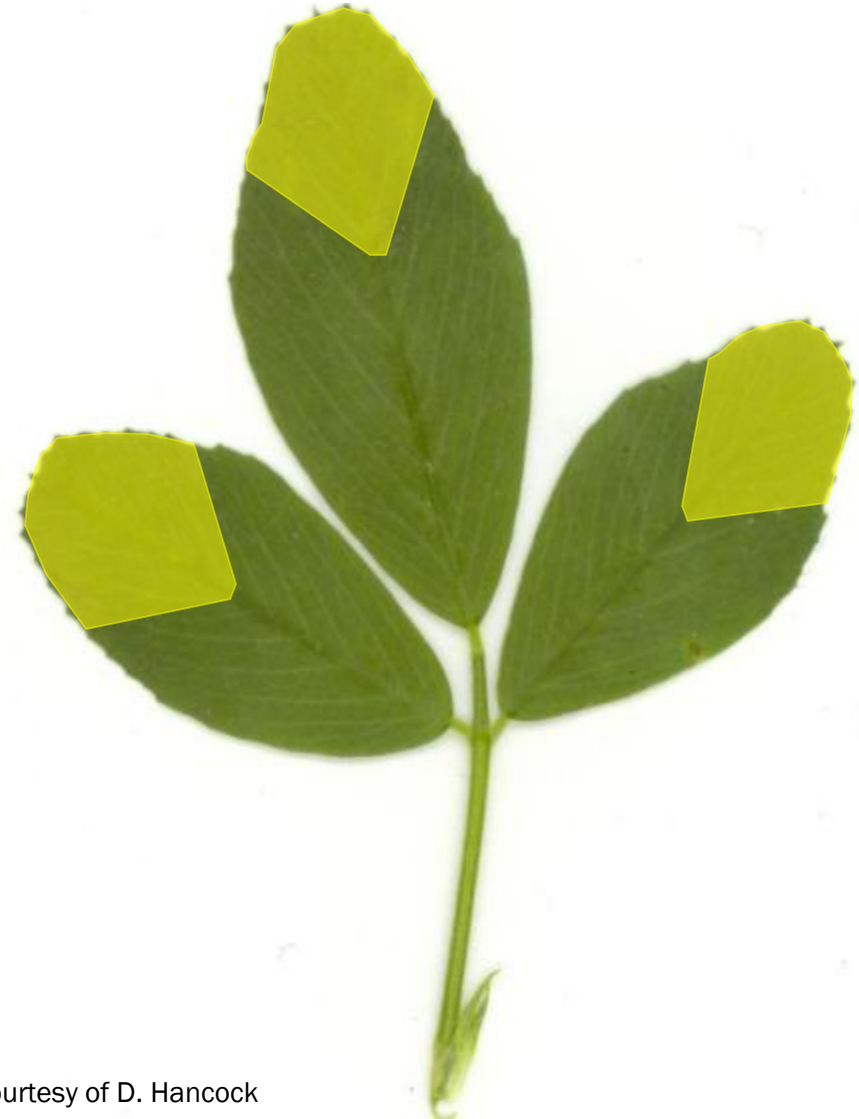
Potato Leafhopper

Potassium Deficiency



Courtesy of D. Hancock

When in Doubt....

Courtesy of L. Baxter

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http://extension.uga.edu/programs-services/integrated-pest-management.html

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What now?

- After emergence – Spray with insecticide to control insect pests
- Irrigate if available
- Remember:
  - *When in Doubt, Scout!*
- G.O.A.L
  - *Get Out And Look!*

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Taking the First Cutting off of the New Stand

Allow to advance in maturity to at least early bloom, if at all possible.

Courtesy of D. Hancock

It’s Here to stay or Go Away?

- Keys to maintaining Alfalfa in Bermudagrass
- Applying K Fertility as recommended
- Following K Fertility recommendations
- Fertilizing with K as recommended
- Apply B and Mo as recommended

Don’t Forget K!!

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Fertilize for Stands to Survive

- Don’t Guess – Soil Test!
- Pay attention to Potassium!
- Remember Micronutrients!

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Meet Forage Needs by
Controlling Weeds
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When in Doubt – Scout!

Judicious management of alfalfa including maintaining proper fertility and regular scouting of weeds and insect pets will help to increase stand persistence.

Research sponsored by:

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Upcoming Event:

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Questions?