ALFALFA IN THE SOUTH
Alfalfa in the South

- Alfalfa (*Medicago sativa*), known as the “Queen of Forages”, is a high-yielding, perennial legume with excellent nutritive quality and high protein.
  - Introduced into GA in 1736
- Extremely versatile, it is grown for hay, silage, pasture, wildlife plots or green chop. It fits well in a crop rotation or as a cash crop.
- Under good management, it yields 4-6 tons per acre and maintains productive stands for 3-5 years; although 10 year old stands are documented.
- Grazing tolerant varieties developed for the South persist well under all rotational stocking programs.
Keys to High Productivity

• SELECT THE FIELD: requires well-drained soils; no Grazon herbicides used in past 12 months
• TEST THE SOIL: does not tolerate low soil fertility or acidity
• FERTILIZE AND LIME: lime to achieve soil pH of 6.5-6.8 and add potassium (K), phosphorus (P), boron (B), and molybdenum (Mo) to soil test recommendations
• SELECT THE VARIETY: consider fall dormancy, disease resistance and/or grazing tolerance
• PREPARE THE SEEDBED: must be well-prepared, firm and free of clods; if planting into established sods, especially Bermudagrass, remove excess growth by mowing or grazing
• PLANT THE SEED: seed at 18-25 lbs per acre (25 lbs for sods) no deeper than ¼ to ½ inch
• CONTROL THE WEEDS: apply pre-emerge chemistry as recommended per label
• MAINTAIN THE STAND: monitor and apply appropriate nutrients based on soil & tissue tests
Planting Versatility of Alfalfa

• Direct seeded into prepared seedbed
• No-till into sod or vegetative cover
• Interseeded into established Bermudagrass
  o No bare ground means less erosion and clean baling
  o Mixture achieves much higher protein and RFQ values than pure Bermudagrass
  o No Nitrogen fertilizer needed; You are simply growing your own Nitrogen!

GOT BERMUDAGRASS?

Why Interseed Alfalfa into Bermudagrass?
• Grow your own nitrogen!
• Increase the quality of your forage by 30 or more RFQ points!
• Makes excellent supplemental feed and/or cash hay crop!
• Growing with Bermudagrass allows alfalfa to dry faster and be harvested clean!
• If nothing else, you still have Bermudagrass!
## When to Seed Alfalfa

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Preferred Fall Seeding Window</th>
<th>Preferred Spring Planting Window*</th>
</tr>
</thead>
<tbody>
<tr>
<td>OK, AR, KY, TN, SC</td>
<td>August 15th to September 15th</td>
<td>March 15th to April 15th</td>
</tr>
<tr>
<td>TX, LA, MS</td>
<td>October 1st to October 15th</td>
<td>March 15th to April 15th</td>
</tr>
<tr>
<td>AL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North</td>
<td>August 15th to October 1st</td>
<td>March 15th to April 15th</td>
</tr>
<tr>
<td>Central</td>
<td>September 1st to October 1st</td>
<td>March 15th to April 15th</td>
</tr>
<tr>
<td>South</td>
<td>October 1st to November 1st</td>
<td>March 1st to April 15th</td>
</tr>
<tr>
<td>GA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper 1/3</td>
<td>September 15th to October 31st</td>
<td>March 15th to April 15th</td>
</tr>
<tr>
<td>Lower 2/3</td>
<td>October 15th to November 30th</td>
<td>March 1st to April 15th</td>
</tr>
<tr>
<td>FL (north of 28th parallel only)</td>
<td>October 15th to November 30th</td>
<td>March 1st to April 15th</td>
</tr>
</tbody>
</table>

*Genuity® Roundup Ready® alfalfa offers the advantage of weed control during spring establishment*
Fall Dormancy Selection

FD 3,4,5
FD 4,5,6
FD 5,6,7
FD 7,8,9
Why Interseed Alfalfa into Bermudagrass?

1) Grow your own nitrogen!
2) Increase the quality of your forage by 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) If nothing else, you still have Bermudagrass!
Forage Availability: Alfalfa Compliments Bermudagrass

COASTAL ZONE

SPECIES | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC
---|---|---|---|---|---|---|---|---|---|---|---|---
Cool Season Grasses
Annual Ryegrass | ANNUAL
Warm Season Grasses
Bermudagrass
Pearl millet
Sorghum x Sudan
Legumes
Alfalfa
Arrowleaf Clover
Crimson Clover
Alternate Forages
Cereal Rye/Wheat | ANNUAL

SOUTHERN TRANSITION ZONE

SPECIES | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC
---|---|---|---|---|---|---|---|---|---|---|---|---
Cool Season Grasses
Annual Ryegrass
Orchardgrass
Tall Fescue
Warm Season Grasses
Bermudagrass
Pearl millet
Sorghum x Sudan
Teff
Legumes
Alfalfa
Ladino Clover
Arrowleaf Clover
Annual Lespedeza
Alternate Forages
Cereal Rye/Wheat | ANNUAL

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Grow Your Own Nitrogen Fertilizer

- Alfalfa can replace using over 200 lbs N fertilizer per acre per year that is normally applied to Bermudagrass
- Calculated savings of using alfalfa as your N source:

<table>
<thead>
<tr>
<th>N Fertilizer Applied (pounds)</th>
<th>Value Per Acre*</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>$72</td>
</tr>
<tr>
<td>200</td>
<td>$96</td>
</tr>
<tr>
<td>250</td>
<td>$120</td>
</tr>
<tr>
<td>300</td>
<td>$144</td>
</tr>
</tbody>
</table>

*Calculated using Urea @ $0.48 per pound N
## Increased Forage Quality

### Feed and Forage Analysis Reports

<table>
<thead>
<tr>
<th>Location</th>
<th>Hay Crop</th>
<th>Relative Forage Quality (RFQ)</th>
<th>Crude Protein*</th>
<th>Total Digestible Nutrients*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valdosta, GA</td>
<td>Tifton 85 Bermudagrass + Bulldog 805 Alfalfa</td>
<td>149.1</td>
<td>21.6%</td>
<td>63.5%</td>
</tr>
<tr>
<td>Valdosta, GA</td>
<td>Tifton 85 Bermudagrass</td>
<td>123.6</td>
<td>12.8%</td>
<td>59.2%</td>
</tr>
<tr>
<td>Jefferson, GA</td>
<td>Bermudagrass + Alfalfa</td>
<td>190.7</td>
<td>23.3%</td>
<td>68.8%</td>
</tr>
<tr>
<td>LaFayette, GA</td>
<td>Bermudagrass + Alfalfa</td>
<td>191.4</td>
<td>20.4%</td>
<td>69.2%</td>
</tr>
<tr>
<td>Eastanollee, GA</td>
<td>Fescue + Orchardgrass</td>
<td>50.3</td>
<td>12.1%</td>
<td>36.1%</td>
</tr>
</tbody>
</table>

*Measured by Near Infrared Reflectance (NIR) Analysis – reported on Dry Matter Basis
UGA Feed and Environmental Water Laboratory – Athens, GA
Excellent Hay Crop That Dries Fast And Harvests Clean

Bulldog 505 Alfalfa/Alicia Bermudagrass in Single Windrows
Harvest Higher Moisture Hay as Baleage

A high quality hay preservative is strongly recommended.
Steps to Interseeding Genuity® Roundup Ready® Alfalfa into Bermudagrass

1) Select a well-drained site for planting. No Grazon herbicides should have been used in past 12 months.

2) Soil test the site. Adequate levels are:
   • pH of 6.5-6.8
   • phosphorus (P) @ 100 lbs/acre
   • potassium (K) @ 250-300 lbs/acre

3) Have dormant Bermudagrass very short (1-2 in). Spray with Glyphosate (Roundup WeatherMax) at 9 oz/acre of 5.5 lb. ai.
   • This will control any annual winter grasses and broadleaf weed that may germinate early.
   • A higher rate of 16-22 oz/acre can be used if the Bermudagrass is completely dormant.
   • It is ok to burn off with fire after the chemical burn down.

4) Seed alfalfa at a rate of 25 lbs/acre on 7-9 inch rows no deeper than ½ inch deep with a no-till drill.

5) After emergence spray with insecticide.
   • Mustang or Karate at the highest rate allowed.
   • This is for mole crickets and other insects that feed on seedlings.
Keys to Maintaining Genuity® Roundup Ready® Alfalfa in Bermudagrass

1) Soil test at least two times annually and follow recommendations.
2) Take a tissue sample 1 week prior to the second cut each year to determine other fertility needs.
3) Apply Boron and Molybdenum as recommended.
4) Scout and spray for the alfalfa weevils in February/March and fall armyworms in summer.
5) Glyphosate applications are recommended if winter weeds reoccur.
   • Apply only during Bermudagrass dormant state (January or February).
   • No Glyphosate applications are recommended during Bermudagrass active growing season.
How is Management Simplified?

• Bermudagrass base makes hay, haylage, and silage cleaner, yet has higher quality.

• No need to fertilize Bermudagrass with nitrogen fertilizer.

• Weed control.
Alfagraze 600 RR

Planted March 31, 2014; Franklin County, Georgia
Total Hay Yield June-September, 2014: 12.6 Tons (5 acres); RFQ: ~190-240
(RFQ of Fescue/Orchardgrass Hay from a Neighboring Field: ~90)
Increased Forage Quality

Feed and Forage Analysis Reports*

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<tr>
<th>Hay Crop</th>
<th>Relative Forage Quality (RFQ)</th>
<th>Crude Protein**</th>
<th>Total Digestible Nutrients**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; cut Bermudagrass + Alfagraze</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600 RR Alfalfa</td>
<td>189.9</td>
<td>20.5%</td>
<td>67.2%</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; cut Bermudagrass + Alfagraze</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600 RR Alfalfa</td>
<td>240.2</td>
<td>25.1%</td>
<td>68.4%</td>
</tr>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; cut Fescue + Orchardgrass</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>86.6</td>
<td>15.9%</td>
<td>51.4%</td>
</tr>
</tbody>
</table>

*Field locations near Canon, GA
**Measured by Near Infrared Reflectance (NIR) Analysis – reported on Dry Matter Basis
UGA Feed and Environmental Water Laboratory – Athens, GA

Winner of 2014 Southeastern Hay Contest in Perennial Peanut/Alfalfa Hay Category
UGA Alfalfa-Bermudagrass Demonstration Near Valdosta, GA

Bulldog 805 alfalfa variety interseeded November 11, 2011
Picture taken April 12, 2012
UGA Alfalfa-Bermudagrass Demonstration Near Valdosta, GA

Bulldog 805 alfalfa variety 2nd year stand
Picture taken March 29, 2013
UGA Alfalfa-Bermudagrass Demonstration Near Valdosta, GA

Bulldog 805 alfalfa variety 3rd year stand
Picture taken April 9, 2014
Have additional questions?
Call toll free 1-800-873-2532