

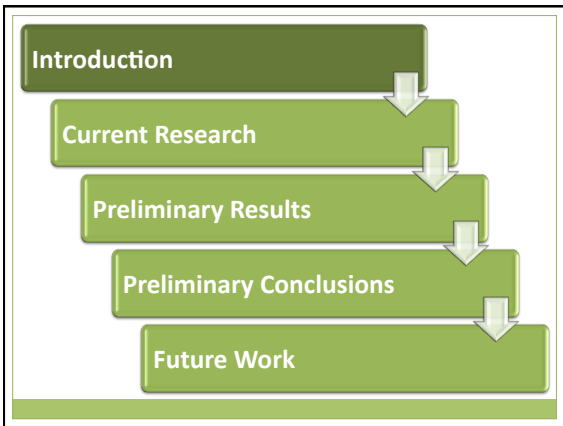
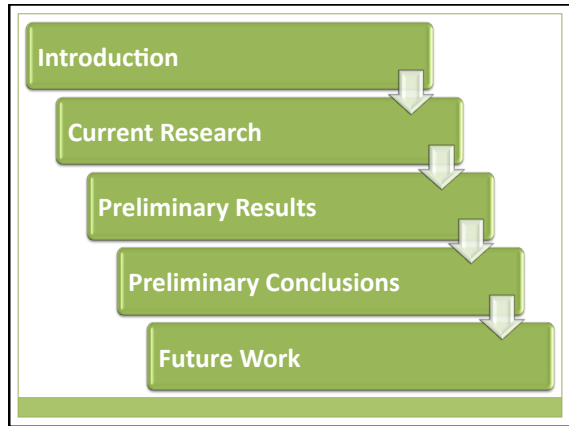


Forage Conference at GCA Convention

Forage Brassicas: Where Do they Fit?


Using a Forage Type Brassica in a Winter Forage Mixture for Raising Stocker Calves and Replacement Heifers

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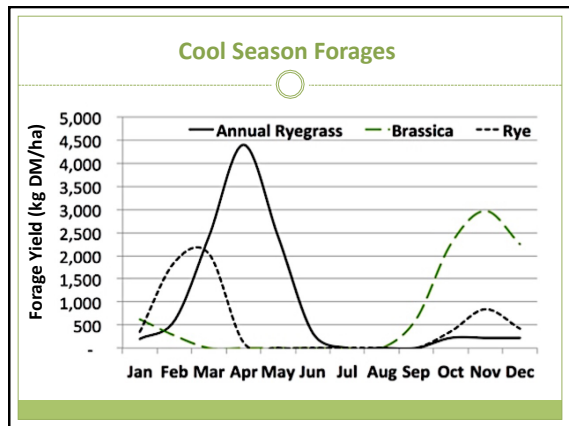
Introduction – What is a Forage Brassica?

- Brassicaceae family
- Kale, rape, swede & turnips
- Cool season annual
- Hybrids – T-Raptor & Pasja
- Hybrids bred for high forage yields and smaller bulbs



Introduction - Rationale

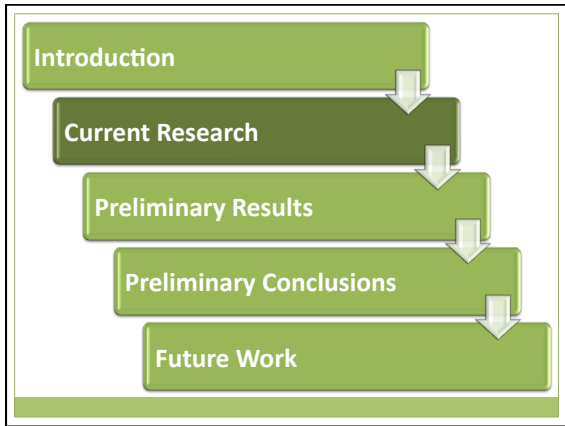
- Rapid establishment (grazing 45-60 DAP)
- DM yields up to 11,000 kg/ha
- When combined with other forages, it can sustain cattle up to 5 months
- Decrease soil compaction & Increase soil water holding capacity(?)

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Current Research

- **Objective:** Determine the effects of planting date and land preparation methods on forage yield and quality
- Randomized complete block design
- 4 land preparation treatments
 - Conventional Till, No-Till + Burn
 - No-Till + Mow, No-Till With Residue
- 4 planting date treatments
 - Sept 1st, Sept 15th, Oct 1st, Oct 15th
- 4 Replications



Small Brassica Plot Map

101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116
S15	O1	O1	S15	S15	S1	O15	O1	O1	S15	O15	S1	S1	S1	O15	O15
NR	CT	NM	CT	NM	CT	NM	NR	NB	NB	NR	NB	NR	NM	CT	NB

Legend



- ◆ September 1st
- ◆ September 15th
- ◆ October 1st
- ◆ October 15th

Legend

- ◆ Conventional Till
- ◆ No-Till + Burn
- ◆ No Till + Mow
- ◆ No Till With Residue

Current Research – Land Preparation



- Conventional Till
 - 3 Passes with tiller
 - Cultipacked
- No-Till + Burn
 - Glyphosate
 - 2.3 liters/ha
- No-Till + Mow
 - 5 cm residue remaining
- No-Till With Residue
 - No land preparation

- ◆ Planting depth = 0.6 cm
- ◆ Row spacing = 19 cm
- ◆ Seeding rate = 4.4 kg/ha

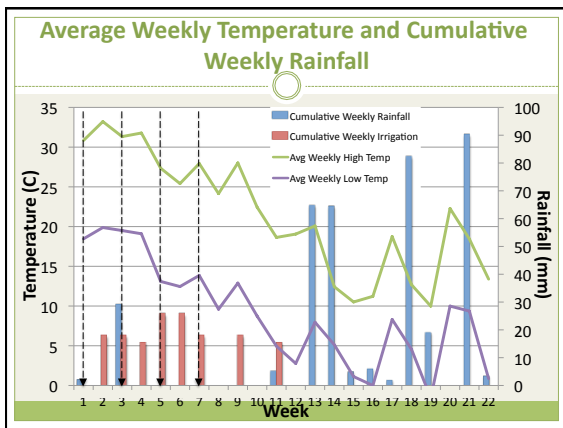
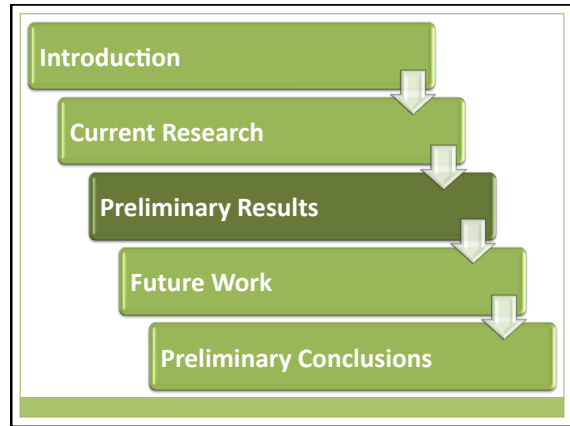
Current Research - Sampling

- Seedling counts 14 DAP
 - Drop stick method
 - 3 observations per plot
- Destructive samples 30, 45, 60 & 90 DAP
 - Leaf count, plant count, growth stage, wet wt., dry wt., rising plate meter (RPM)
 - 3 observations each plot
 - 0.1 m² quadrant
- 60 & 90 DAP forage nutritional value

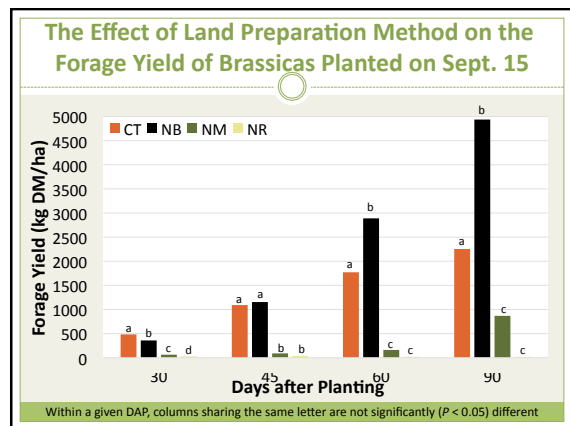
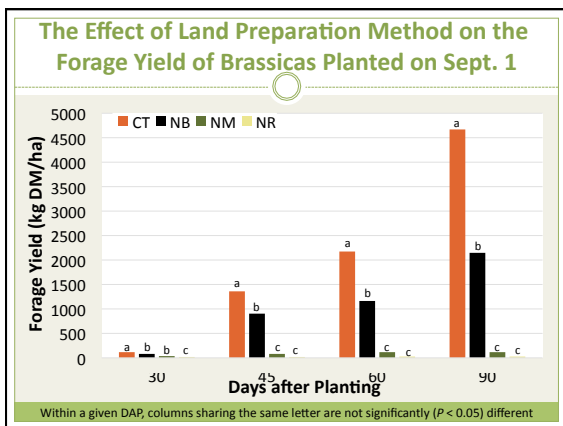




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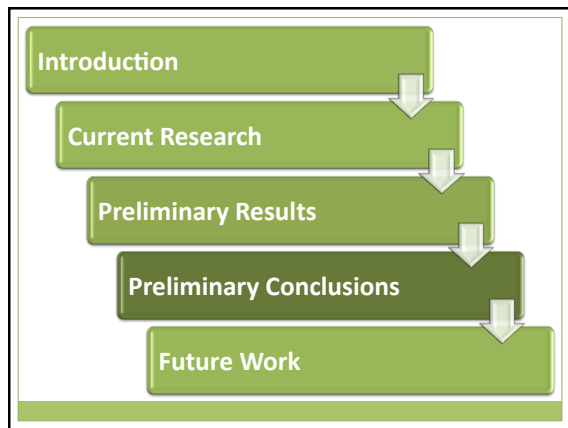
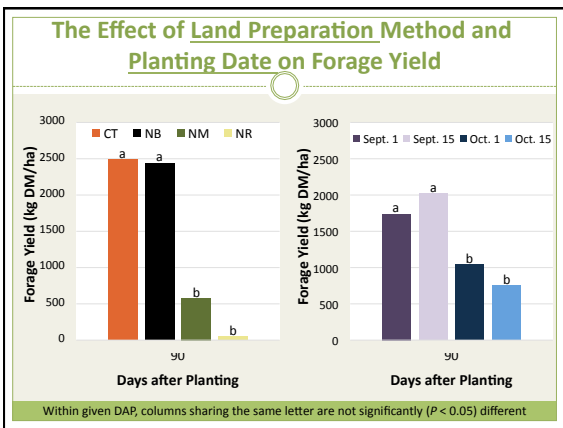
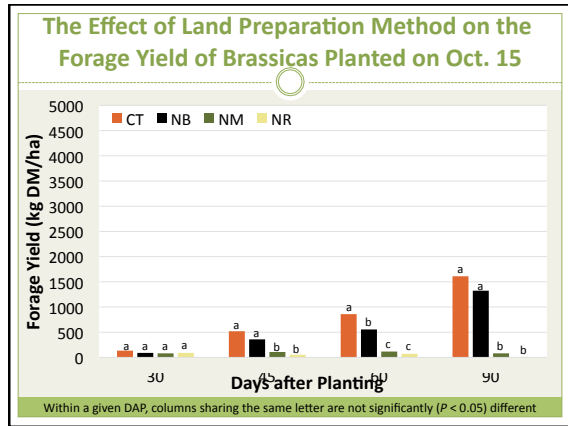
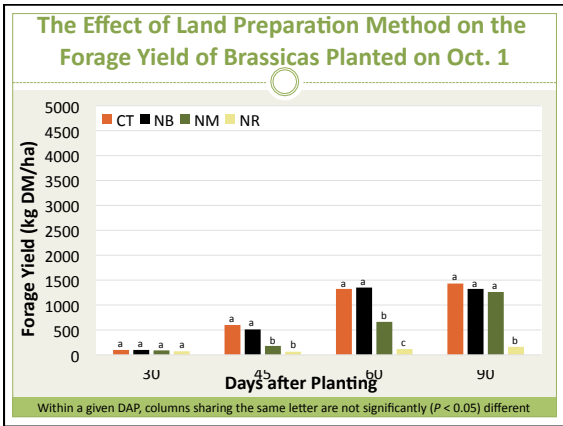
- Preliminary Results**
- Only forage yield results
 - Other results (growth stage, plant count, leaf count) will be presented at a later date
 - Significant effects of:
 - Planting date
 - Land preparation method
 - Interaction between planting date X land preparation



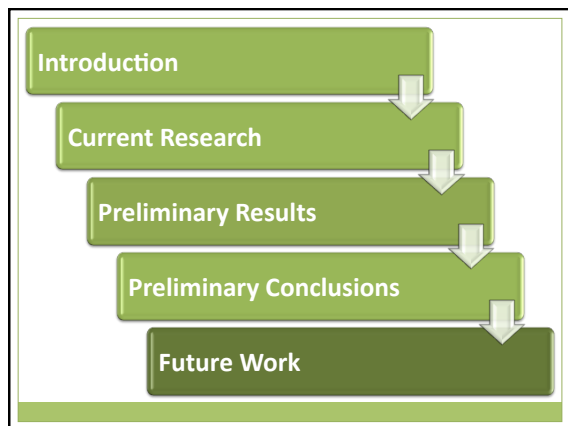
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- Preliminary Conclusions**
- Later planting dates = generally lower forage yield
 - Less residue = generally higher forage yields
 - **Take home message:** early September planting dates & sowing into little or no residue produces highest forage yields
 - Future work will further explain how forage brassicas can be used in a grazing system in Georgia



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Future Work

- **Objective 1:** Determine performance of a brassica as a forage source when combined with rye, annual ryegrass & crimson clover
 - AVDG, Stocking Rates, Grazing period
- **Objective 2:** Compare changes in soil quality
 - Soil compaction, water holding capacity, OM
- **Objective 3:** Examine the effect of late winter and spring planting dates (February-June) on forage yield potential

