



ing for Leyland on.



or Erosion ction



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DURATION: 2000 – 2003

COOPERATORS: SARE, NRCS, UGA

LAND USE: CROPLAND

VEGETATIVE PRACTICES: 327 CONSERVATION COVER

RESOURCE CONCERNS: SOIL AND SOIL EROSION

LONG RANGE PLAN: Study falls under IV M – Cover Crops for Erosion Control in Christmas Tree Production Areas

PROBLEM: Christmas trees and other orchard crops are traditionally planted with little or no thought given to soil erosion and weed control. It is essential that weed growth around young seedlings be controlled to prevent deformity of lower limbs and to eliminate competition for water and nutrients. This is usually done by mowing and through the use of herbicides which is expensive, time consuming, leads to soil erosion, and could possibly be harmful to the environment.

Producers need economically and environmentally sound recommendations on cover crops that will reduce soil erosion, undesirable weed growth and the use of herbicides while not having a negative impact on growth and/or yield. Therefore, this study on Piedmont soils of Lamar Co., Georgia will determine effective ground covers to control erosion, inhibit undesirable weed growth, reduce the use of herbicide and to promote the growth of Christmas trees and other orchard type crops.

STATUS OF KNOWLEDGE: Most of the cultivars and selections of this study are well documented for ground cover, conservation tillage, forage production, and other uses. However, their potential as a cover crop for Christmas tree orchards in Piedmont Georgia is relatively unknown. This study will attempt to determine the most effective ground covers for these situations.

EXPERIMENTAL DESIGN: Randomized complete block design with four (4) replications.

TREATMENTS: COOL-SEASON COVER CROPS

1. Cherokee Red Clover
2. AU Robin Crimson Clover
3. Button Clover
4. AU-Sunrise Crimson Clover
5. GA-5 or GA-Jesup Fescue
6. Subterranean Clover
7. Virginia Wildrye
8. Ladino Clover

WARM-SEASON COVER CROPS

1. Brunswickgrass – Crimson Clover or Red Clover Overseeded in the Fall of 2000
2. Tropic Lalo Paspalum
3. Kobe Lespedeza
4. Buffalograss
5. Perennial Peanuts
6. Marshhay Cordgrass

MATERIALS & METHODS: The trial began with the planting of various cover crops in one and two year old Christmas Tree plantations. Both summer and winter cover crops were planted. Legume and non-legume crops were used.

- Crops were replicated three times with control plots showing what is currently being done.
- Soil types were identified.
- Growth measurements were taken on trees in the plots.
- Weather records were kept.

RESULTS: Cherokee Red Clover (*Trifolium pratense*) persisted, provided good ground cover during the cool season and the stand lasted later into the spring.

Brunswickgrass (*Paspalum nicorae*) provided good cover during the warm season. It can tolerate close mowing in Christmas tree production areas.



Brunsw Brunswick Christm



Crimso