

Selecting Forage Tall Fescue under Competitive and Non-Competitive Conditions. (C01-santen162503-Oral)

Authors:

- E.van Santen* - *Auburn University*
- M.D.Casler - *University of Wisconsin*
- S.Johnson - *Cebeco International Seeds*

Abstract:

Selection for improved forage yield is often practiced in a spaced-plant nursery without any competition. Our experiment aimed to look at the changes that occurred when RPS is practiced in a spaced-plant nursery with minimal competition from weeds vs. a nursery where competing species are allowed to develop freely. Seedlings were established in the greenhouse in late summer and transplanted to a spaced-plant nursery at the Plant Breeding Unit, Tallahassee, AL in early October of each year. Plants were allowed to grow until the following October when both nurseries were trimmed back. After a 4-wk regrowth period a grid was superimposed on each nursery and plant size scored within each 25-plant block on a scale of 0-9. Selected individuals within each scheme were intermated in Oregon. Three cycles of selection have been completed. Selection under competitive conditions resulted in slightly earlier maturity with each cycle, whereas no changes were observed for selection under no competition. By cycle 3, first-cut dry matter yields had increased dramatically. Gains achieved from selection under minimal competition were at least twice as high as gains from selection under competition.

Corresponding Author Information:

Edzard van Santen	phone: 334-844-3975
Auburn University	fax: 334-844-3945
Dept. of Agronomy and Soils	e-mail:
Auburn University, AL 36849-5412	evsanten@acesag.auburn.edu

Presentation Information:

Presentation Date: Thursday, November 14, 2002
Presentation Time: 9:15 am

Keywords:

Recurrent phenotypic selection, competition, correlated response, gain from selection