Virginia Tech
VIRGINIA POLYTEHNIC INSTITUTE AND STATE UNIVERSITY

Drought Tolerance of Kentucky Bluegrass as Influenced by Bolster® Plant Biostimulant Incorporated with Cellulose Paper Mulch at Time of Seeding

R. E. SCHMIDT, CROP AND SOIL ENVIRONMENTAL SCIENCES DEPT
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

PROCEDURE:

Ram 1 Kentucky bluegrass was hydroseeded in the field at 100 lb. per acre with cellulose paper mulch (1500 lb./A) blended with various dosages of Bolster® during September 1993. Plugs were sampled from the plots on March 2, 1994. The soil was washed from the roots and transplanted to terrariums, each of, which contained 15 kg of soil adjusted to 7% moisture. The grass was permitted to grow under this water stress condition for six weeks. At that time, leave moisture stats, root mass, and foliar yields were determined.

RESULTS:

Kentucky bluegrass leaf moisture content was enhanced from 23% to 27% with Bolster® treatments of 0.5 to 2 gallons per acre (Fig.1). Root mass increased from 33% to 128% when Bolster® was applied with the hydroseeding mulch (fig.2).

The application of Bolster® to the hydroseeding slurry subsequently enhanced foliar development by 20% to 95%. The most foliage was obtained with the Kentucky bluegrass that was treated with 1 gallon of Bolster® per acre in the hydro slurry (3).

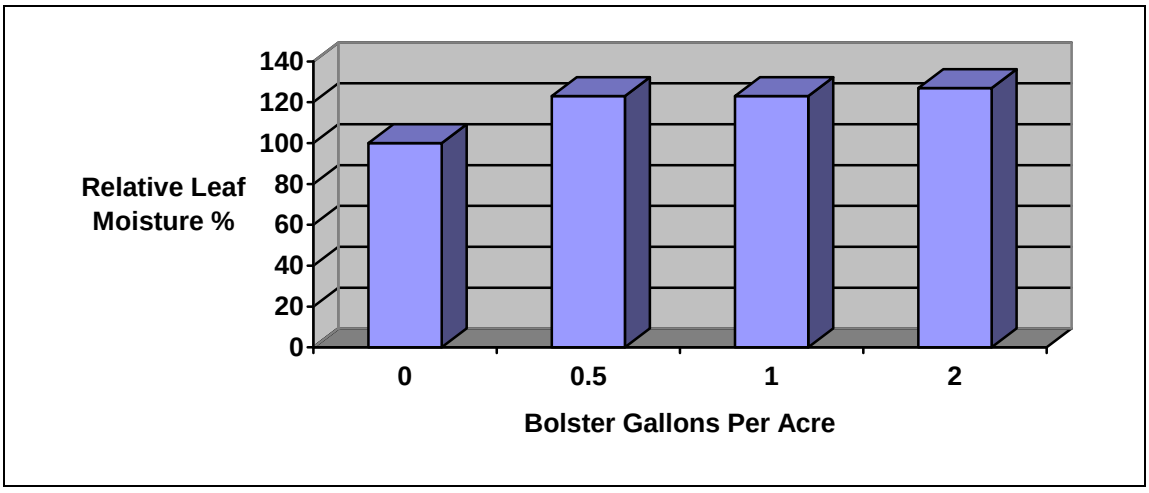

Fig.1. Drought tolerance of Ky bluegrass. Influence of Bolster treatments on leaf moisture content compared to control.

BOLSTER® Plant Biostimulant is a registered trademark of Sustane Natural Fertilizer

Drought Tolerance of Kentucky bluegrass as Influenced by Bolster® Plant Biostimulant Incorporated with Cellulose Paper Mulch at Time of Seeding

R. E. SCHMIDT, CROP AND SOIL ENVIRONMENTAL SCIENCES DEPT
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

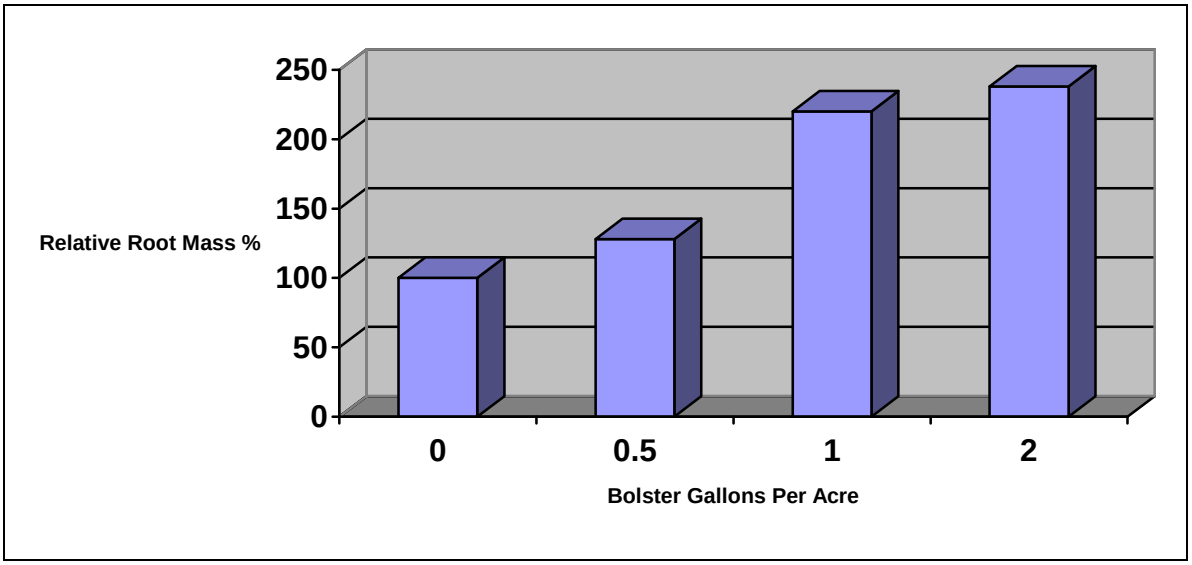

Fig.2. Drought tolerance of Kentucky bluegrass. Influence of Bolster treatments on root mass compared to control.

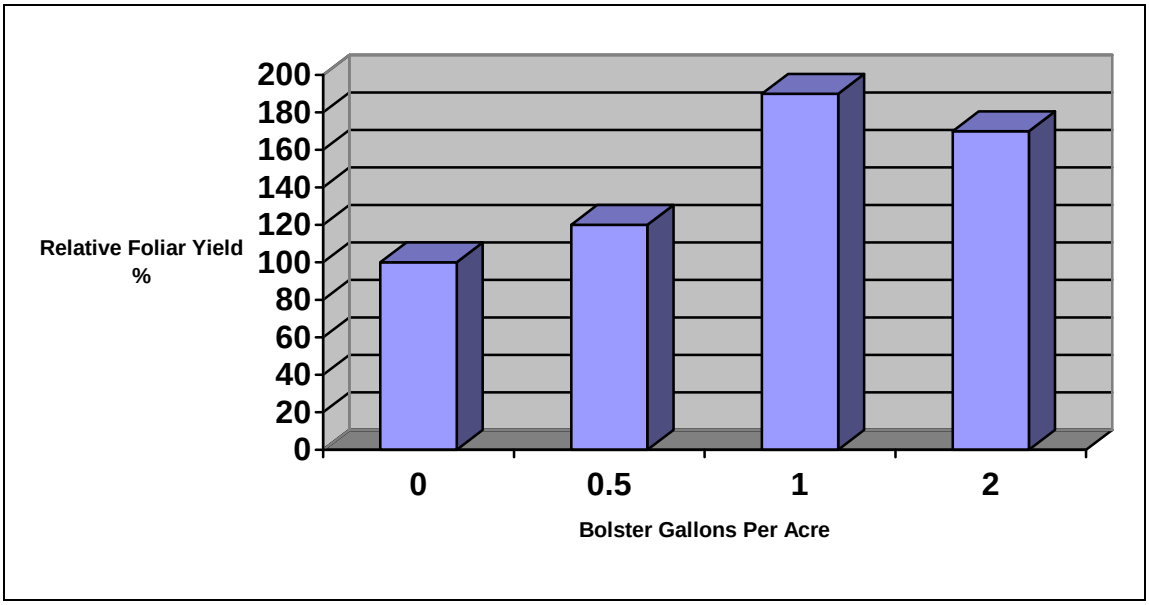

Fig.3. Drought tolerance of Kentucky bluegrass. Influence of Bolster treatments on foliar growth compared to control.