

The influence of Bolster® Plant Biostimulant combined with Sustane® organic fertilizer On Root Mass on Georgetown Kentucky bluegrass Sod 1996

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OBJECTIVE:

To determine if there is an effect on sod root mass (pulling strength) by utilizing low rates of a high quality organic fertilizer (Sustane 2-3-3) as a dry carrier for Bolster plant biostimulant.

METHODS:

Georgetown Kentucky bluegrass was seeded in September 1995 and fertilized with one pound of nitrogen per 1000 sq. ft. (29-3-10) in October 1995, May 7, 1996, and May 17, 1996. Three ounces (3 oz.) of Bolster was sprayed onto 5 pounds and 10 pounds of Sustane 2-3-3 organic fertilizer and applied to the turf on May 11 and again on June 16, 1996. These treatments were compared to 3 oz. Bolster sprayed with one gallon of water per 1000 sq. ft. and to an untreated control plot.

One square foot of sod was sampled from each plot on June 20, 1996 and again on August 24, 1996. The extracted samples were placed on one square foot of expanded metal screen and replanted into soil. The sod plots were irrigated to prevent drying. Root development was determined using a vertical lift technique one month after transplanting. The results are expressed in the accompanying table as kg. of pull required to dislodge or lift the sod from the expanded metal screen in soil. The greater the energy required to lift the sod equates to greater root development after sodding.

RESULTS:

Three ounces (3 oz. per 1,000 sq. ft.) of Bolster applied to 5 and 10 lb. of Sustane organic fertilizer stimulated root development of Kentucky bluegrass when compared to Bolster (liquid) alone or to the untreated control.

When Bolster was applied with 10 lb. of a dry organic carrier (Sustane 2-3-3 organic fertilizer), rooting of the transplanted sod was significantly enhanced in July and September. It appears that the Sustane material – even at very low doses, contains additional plant stimulators that enhance turfgrass production by increasing root mass more than Bolster plant biostimulant alone.

Table 1. Effect of low doses of Sustane organic as a carrier for Bolster plant biostimulant on root development of transplanted Kentucky bluegrass sod.

Treatment	Treatment	Root Development	Root Development
Bolster biostimulant	Sustane Organic	July 18, 1996	September 24, 1996
Amount per 1,000 sq. ft.	Amount per 1,000 sq. ft.	kg. of pull per 1 sq. ft.	kg. of pull per 1 sq. ft.
3 oz.	0 lb. Sustane 2-3-3	30.3	47.0
3 oz.	5 lb. Sustane 2-3-3	36.0	60.8
3 oz.	10 lb. Sustane 2-3-3	36.5	75.0
Untreated Control	Untreated Control	25.8	52.3
Differences between 2 means	are significant.	10.6	20.0

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