



Erosion Control Research Highlights FY2018

Brian Gardener, Ph.D.
Sustane Natural Fertilizer, Inc.

www.Sustane.com

CC's Persistence of Benefits

- Suståne's concentrated compost (2-6-3) and related materials are used widely in EC market to enhance revegetation
- Contractors in west need to reestablish SOM, improve WHC, and deliver nutrients cost effectively to succeed
- 2014 trial by NM DOT compared Suståne's CC vs a local-sourced wet compost (NM C)

2014 Trial Results

Prescriptions for Successful Revegetation

Bringing Life to 'Dead' Soil in New Mexico



NM DOT revegetation demonstration trial plots two months after seeding on highway overpass construction project. From top to bottom: unfertilized control, concentrated compost, and NM DOT compost.

Reported in Land and Water Jan/Feb 2015 pgs. 2-7.

Comparison of Treatments

Parameter	Concentrated Compost	NM DOT Compost	Unfertilized control
Rate (ton/acre)	3	75	0
Rate (in./acre)	negligible	1	0
Nitrogen rate (lb./acre)	120	1,260	0
Ammoniacal N (lb./acre)	11	202	0
Phosphate rate (lb./acre)	360	2,190	0
Potash rate (lb./acre)	180	900	0
pH	6.5	8.1	N/A
Carbon to Nitrogen (C:N) ratio	9:1	20:1	N/A
Conductivity (dS/m)	20	2	N/A

Table 1. Trial plot compost rates and parameters.

Sustâne's CC cost less to deliver, was easier to apply, and did not oversupply nutrients

Initial Results



Sustane's CC provided more ground cover and superior EC than NMC four months after application

How long do the EC benefits persist?

- Pojoaque site revisited in 2018
- **February: Soil sampling showed no significant soil differences, but anecdotally visual differences in plant cover**



Persistent Plant Cover Measured

- Pojoaque site revisited in 2018
- **August: Systematic plant survey quantified differences among treatments**



CC's Persistence of Benefits

UTC

Sustãne CC



**Sustãne plots had greener, healthier looking plants in
Aug 2018**

CC's Persistence of Benefits

NM C



Sustãne CC



NM C plots had more woody refuse (a potential fire hazard) on the ground surface

CC's Persistence of Benefits

2018 Revegetation Assessments

Tmt	#Plants/ square		% Ground Cover	
UTC	4.7	c	19.0	b
Sust CC	12.7	a	24.0	a
NM C	9.2	b	16.5	b

4 years after application, revegetation success was significantly better in the Sustane treated plots