



Reporting Our Progress in Caring for the Land and Serving People



Biochar Use as a Soil Amendment and Seed Coating Soils Program FY2012 Accomplishments Umatilla National Forest, Pacific Northwest

State: Oregon/Washington

Congressional District: Oregon/Washington

Accomplishments:

- Installation of broadcast Biochar plots in a fallow wheat field.
- Proven ability to use Biochar as seed coating. Results are expected to improve seed germination and survival in native and agricultural seed plantings.

Forest Service Contribution: \$5,000

Partner Contribution: \$30,000

Project Costs: \$35,000

External Partners:

Walking Point Industries (WPI), Oregon State, Gary Bettes (Farmer). WPI is a combat disabled veteran owned small business.

Internal Partners:

Umatilla NF, Rocky Mountain Research Station.

Establishing plantings can be expensive; costs depend partly on ability of the seed to germinate and survive under adverse conditions. This project was conducted in the harsh environments of dry forests and dry-land farms in eastern Oregon. It investigated improvement in overall site conditions as well as micro-sites through applications of Biochar made from waste wood. Preliminary results from Oregon State University showed that without any precipitation, volunteer wheat sprouted in a fallow field amended with 40 t/ac Biochar within two weeks. Follow-up studies are now taking place at OSU. Results could lead to new methods for agricultural carbon sequestration.



Photo of wheat coated with Biochar.



Native seed (Wyeths Buckwheat).

WPI has donated tons of Biochar and expensive-to-produce small lots of coated seed. Our partner provided these products to the FS specifications needed for testing purposes; all products were donated to the FS. Native seeds are coated to rates of 1:1, 2:1, 4:1 Biochar:seed, and agricultural seeds at rates of 0.25:1, 0.5:1, 1:1 & 2:1. The price of Wyeths Buckwheat can be \$90/lb, and some native seed costs more. Improvements to native seed germination could improve rehabilitation efforts like BAER.

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