



**American Seed Trade Association
Statement by
Mark Mustoe, Co-Owner and Manager of Clearwater Seed
Before the
United States House of Representatives
Committee on Appropriations, Subcommittee on Interior, Environment, and Related
Agencies**

**Regarding
Efficient Native Seed Use by the Bureau of Land Management**

April 10, 2014

Chairman Calvert, Ranking Member Moran and members of the Committee, thank you for the opportunity to testify before you today. My name is Mark Mustoe and I am co-owner and manager of Clearwater Seed Company in Spokane, Washington. Clearwater Seed is a grower owned company with a commitment to the production and marketing of high quality native grasses, forbs, and legumes. In addition, we offer turf and forage mixes along with other native hand collected species. We are a seed company made up of growers who know the importance of sound land stewardship practices for restoration and preservation.

I am here today representing the American Seed Trade Association (ASTA). Founded in 1883, ASTA represents over 700 companies involved in seed production and distribution, plant breeding, and related industries. My testimony includes recommendations for the U.S. Department of the Interior, Bureau of Land Management (BLM) practices for native seed development and procurement.

The Environmental and Conservation Seed Committee of ASTA represents approximately 80% of the companies that sell native seed to the U.S. government for restoration, reclamation and conservation projects by the BLM. The vast majority of these companies are small, but many have been in the native seed business for decades. We are concerned that the policies and directives of the BLM, with regard to use of native seeds, are not efficient or practical and that current seed procurement policies are not sustainable in the existing budget climate. We recommend that the BLM revisit its current practices and allow more known introduced species to be used in fire reclamation and restoration projects. We also recommend that they permit USDA's Agricultural Research Service and Natural Resources Conservation Service, through the Plant Material Centers, to lead long-term studies to determine appropriate varieties for BLM projects versus the current duplicative process done through the U.S. Geological Survey.

Our comments today are grounded in both seed science and practical seed production and we wish to illustrate opportunities for the BLM to increase efficiency and improve the environment by recognizing consensus principles of land restoration. First among those is that proactive land management practices will reduce wildfire severity and break the emergency response cycle.

The goal of native plant community restoration is admirable, however the primary assumption that we can re-establish native plants to a rangeland site simply by adding native or even indigenous seed to any given site, is unproven at best and in many instances wrong. There are numerous reasons why this assumption is often invalid, including degradation of sites through various vectors of disturbance; climatic changes between current conditions and conditions at the time of historic or even current plant community development; and the explosion of invasive species across rangelands.

It is apparent that ecological damage to western rangelands is accelerating due to increased cheatgrass encroachment, increased wildfire frequency, and altered soil-nutrient cycling. These factors make establishment of native species much more difficult, heightening the importance of plant materials that can perform under these ecologically modified conditions. Ecologists recognize that we live in a world that has been highly ecologically modified, both intentionally and inadvertently, by human civilization. The ecosystems that the BLM wishes to restore function differently than the historic ecosystems that they presumably wish to replicate.

Studies have shown that general adaptation across a variety of environments is just as important to performance as local adaptation to a single local environment. Extensive scientific analyses of thousands of comparisons (Leimu and Fischer; Hereford) have shown that the assumption that local plant materials perform best is not true in many cases. The BLM is downplaying the significance of general adaptation and placing primary importance on geographical origin rather than performance when choosing plant materials. It is imperative that as program analyses and procurement decisions are made that the best available science is considered and implemented. Emphasizing performance and adaptation in seed procurement would increase the likelihood of successful re-vegetation while simplifying the BLM's seed procurement and keeping seed expenditures from skyrocketing. We would be happy to introduce the committee to additional scientists who can provide information on this subject.

The BLM's native plant material development and procurement efforts are an unrealistic and unsustainable goal for the federal government. Other agencies, such as the USDA's Agricultural Research Service and Natural Resources Conservation Service, have traditionally sought to develop plant materials that are geographically adapted to a larger but similar ecological site. This approach results in a more reasonable number of plant materials which the seed industry can viably support. Since 2001, the BLM has spent over \$70 million on native plant material development efforts. The extensive suite of plant materials that the BLM wishes to impose through this program are not economically viable. Furthermore, the long-term plant material development efforts of other federal agencies are not being fully utilized.

In its "Native Plant Materials Development Program Progress Report for FY2001-2007", the BLM states that its plan is to develop 1,000 native restoration 'workhorse' species, 250 of which would have transfer zone guidelines developed (v, 19, 20). The report also states that the program's purpose is to develop a long-term plan "*to ensure a stable and economical supply of native plant materials*" as mandated by the FY2001 Department of Interior and Related

Agencies Appropriations Act (v). It appears that the BLM is attempting to replicate the USDA's Plant Material Centers from scratch instead of collaborating with them. This type of duplication is unnecessary, costly and inefficient. Even if the BLM could sustain the funding needed to develop so many materials, it is not realistic to expect seed companies to manage the logistics of producing, selling and storing small quantities of 1,000 different species of seed grown in so many local zones. The costs and therefore the seed price to the BLM would be astronomical. Single, widely adapted plant materials must still be acceptable.

In addition, before any of these new plant materials are recommended for use in seeding on public lands, field testing to provide evidence of their potential to germinate and establish in sites representative of the intended sites needs to be conducted. The USDA's Plant Material Centers have a process to not only develop but also test and commercialize appropriate native materials. The rigors of field testing take time, but as with many of the properly tested and released materials on the market, the probability of success and the predictability of the breadth of applicable sites are greatly enhanced. Our records document that the BLM frequently seeks to procure seeds from unproven species or varieties which are deemed local ecotypes. It is difficult and frequently impossible for the seed industry to supply the species and quantities the BLM requests when they specify materials that have not been proven to establish and have not been studied for their ability to produce seed. It is our opinion that there is a non-scientific bias for these selections. Inclusion of desired, but untested, plant materials in requested seed mixes dramatically increases the seed cost and also puts in jeopardy the lands that will be left open to erosion and invasive plant dominance should the seeding fail.

Currently, the species requested in the BLM's bids are unpredictable. This is not just because the BLM buys most of its seed in response to wildfires. There is a large selection of species available with a proven track record of seed production and successful re-vegetation establishment, however as mentioned previously, the agency is moving towards bids for "source identified" or local ecotypes. When available, these local ecotypes can cost nearly double established varieties. Furthermore, the large quantities of seed necessary to provide an effective response to a major wildfire season are frequently not available when needed most simply for the reason that that the BLM is requesting seed that is not being produced.

If the BLM consistently specifies seed that has a proven track record of production and successfully establishing in impacted areas, the seed industry would be able to supply it in the quantities required. It has come to our attention that companies have been created solely to meet BLM's demands for newly identified local ecotypes. Our companies, which have been in business for decades do not view this as a sustainable business model. We recommend that the BLM utilize established restoration methods and proven genetic materials. There is no need for the BLM to request the use of plant materials in re-vegetation or restoration efforts that have not been vetted through the rigors of established testing protocols such as those managed by the USDA.

Recognizing the need for greater transparency in the BLM seed procurement practices, the FY2014 omnibus appropriations bill included the following language—*"The Committee is*

concerned that seed procurement procedures and priorities are duplicative and add unnecessary costs to Bureau programs. The Committee instructs the Bureau to establish a system to publicly communicate its yearly estimated seed needs by variety.”

The BLM must implement the FY2014 appropriations language. In addition, we recommend the following instructions be added to this language in the FY2015 appropriations bill:

- *The Bureau should give a higher priority to the most cost-effective and readily available seed varieties in its purchasing decisions where appropriate.*
- *The Bureau should coordinate with the Plant Material Centers at the USDA’s Natural Resources Conservation Service and Agricultural Research Service in making such determinations. Sharing of research data between all government agencies should be encouraged.*

It is imperative as program analyses and procurement decisions are made that the best available science is considered and implemented. ASTA whole-heartedly supports ongoing funding for pro-active restoration and reclamation projects by the BLM. However, greater collaboration and coordination between agencies must occur if program funding is to be spent wisely using scientifically proven methods and plant materials. Our goal is no different than the BLM’s, restoration of more public lands with a common sense approach for a better environment for all.

Thank you for the opportunity to testify today and I stand ready to answer any questions on behalf of the companies that provide seed for America’s land restoration and reclamation programs.

Works Cited

1. U.S Department of the Interior. Bureau of Land Management. *Native Plant Materials Development Program*. 2009. Print.
2. Leimu, Roosa, and Markus Fischer. "A Meta-Analysis of Local Adaptation in Plants." *PLoS ONE*. 3.12 (2008):
3. Hereford, Joe. "A Quantitative Survey of Local Adaptation and Fitness Trade-Offs." *American Naturalist*. 173.5 (2009): 579-588.