# Position Statement from the American Seed Trade Association

The seed industry has long recognized the importance of planting seed that is adapted to the site. The industry has come a long way since the early “Dust Bowl” years when there were relatively few species commercially produced for restoring damaged lands. The number of species currently produced by the seed industry for land repair far exceeds the number of species produced by all other seed industries combined. However, land repair seed requirements are relatively small, requiring few total pounds each year. The seed industry has always depended upon its customers for guidance in producing the species they need to get their job done. However, the process breaks down when the seed supplier is uncertain of what the seed user needs because of changing goals and objectives of land repair.

The purpose of this Position Statement is to set a framework within which the land manager can make consistent decisions that the seed supplier can predict. Since the seed supplier must plan their crops one or more years in advance, a consistent and predictable use of materials will help ensure that the correct species are produced in the quantities needed to service the land repair business. The American Seed Trade Association (ASTA) believes that the process of specifying plant material for land repair can be made more predictable if the land manager follows certain guidelines when planning present and future land repair projects.

## These guidelines are as follows:

Identify a flexible set of goals and objectives for the land repair project.

Carefully assess those goals and objectives to ensure they are ecologically and economically achievable.
Select plant materials that are consistent with the goals and objectives of the project.
Select plant materials whose ecological and economic success to the project can be demonstrated by sound science.
Select plant materials that are either currently available in the marketplace or can be acquired within a reasonable period of time.
Change the goals and objectives of the project when they are difficult to attain because of ecological or economic constraints.
Publish reports of project successes and failures and encourage research institutions to improve the techniques used for land repair.

# Definitions:

In order to reduce confusion and ensure that concepts mentioned in this position statement are clearly understood, ASTA believes it is necessary to clearly define some of the major terms used in the land repair industry.

## Land Management Definitions:

ASTA recognizes that land management goals can range in scope from: a) restoring the community to a pristine state to b) rehabilitating a community to a cultural use, such as an improved pasture. In order to assist the land manager in making sound decisions and the seed industry in acquiring the needed species to service these decisions, ASTA believes that the land manager should define his goals within the context of land management terminology. The following terms are used to assist at arriving at this end.

**Land Restoration:** The re-creation of conditions that would allow the ecosystem to return to the characteristics that are ecologically representative of those prior to the land disturbance.

**Land Rehabilitation:** The establishment of an ecosystem that is ecologically reminiscent of, but not representative of, the pre-disturbance ecosystem, including native and/or introduced species that are similar in ecological structure and function to species native to the site.

**Land Reclamation:** The creation of an ecosystem that is substantially different ecologically from the endemic ecosystem, yet is compatible with existing land-use practices, such as grazing, recreation, or supplemental irrigation.

## Plant Materials Defined:

**Local Native Plant Material:** Plant material that is the same species as plant material naturally occurring at the site and whose origin is from the region where it is being planted. It may be wildland-harvested, pre-varietal, or variety/cultivar plant material as long as the first generation of plant material came from the region where it is being planted.

**Non-Local Native Plant Material:** Plant material that is the same species as that occurring at the site but that does not originate from the region targeted for use.

Introduced Plant Material: Plant material whose species is not native to the region where it is being planted.

**Released Plant Material:** Plant material that has been made available to the public after approval by officials in the public or private sectors. It may be either a variety/cultivar or a pre-variety germplasm; be either local native, non-local native, or introduced in origin; originate from either a single location or multiple locations; and be developed using the plant breeding techniques of hybridization and artificial selection for certain

performance characteristics (“genetically manipulated”)or without such techniques (“natural”).

## ASTA’s Position on the use of Plant Material for Land Restoration, Rehabilitation, and Reclamation:

ASTA recognizes that the goals and objectives identified for repairing land can differ from project to project.

ASTA also recognizes that the differences in definition between land restoration, reclamation, and rehabilitation may not be distinct but rather form a continuum from one objective to the next. ASTA recognizes that plant communities, undisturbed or disturbed, are always changing and that the differences between restoration, rehabilitation, and reclamation may intergrade when considering the direction the natural plant community may be moving.

ASTA believes that the land manager must carefully specify a goal that is attainable. He must determine the overall objectives of the project and then select the plant materials to best attain those objectives.

**Plant Materials for Land Restoration:** ASTA advocates the use of Local Native Plant Material when the goal of the project is Land Restoration. ASTA understands that Land Restoration objectives can differ from project to project because of factors such as degree of disturbance, availability of plant material, and cost of the project. ASTA believes that if the goal of the project is restoration of the species composition that is genetically similar to the pre-disturbed community, if that goal is economically reasonable, and if the plant material is either readily available or can be acquired within a reasonable period of time, the land manager should use Local Native Plant Material.

However, if the materials are not available or are unreasonably expensive, ASTA recommends the use of Released Plant Material, either Local Native Plant Material if available, or otherwise Non-Local Native Plant Material.

ASTA recognizes that Land Restoration is an objective that may be impossible to achieve in the short term. However, ASTA also believes that a step in this direction may be attained< by using a combination of Local and Non-Local Native Plant Materials that have either been Released and produced under cultivation or wildland-harvested with or without Release.

ASTA believes the use of Introduced Plant Materials may be necessary for situations where the disturbance to the site has been so severe as to greatly diminish the ability of Local Native Plant Materials to establish and reproduce.Under these circumstances, Introduced species may be used to facilitate the future establishment of Local Native species, i.e., assisted succession.

**Plant Materials for Land Rehabilitation:** ASTA understands that the goals of Land Rehabilitation may differ between projects. ASTA understands that the goal for some projects may be the use of Native Plant Materials while the goal for other Land Rehabilitation projects may be the use of a mixture of Introduced and Native Plant Materials. However, the common goal for all Land Rehabilitation projects is the creation of a plant community that is self-sustaining without periodic human intervention.

ASTA recognizes that Released Plant Materials have been subjected to a variety of testing protocols, such as site adaptation, seed yield, and pest resistance. Because of this testing, ASTA believes that the risk associated with using Released Plant Materials is less than the risk associated with Non-Released Plant Materials.Furthermore, Released Plant Materials are more readily available in the marketplace than

Non-Released Plant Materials.Therefore, ASTA suggests that the first choice of plant material for Land Rehabilitation should be Released Plant Materials.

ASTA recognizes that no Released Plant Material may be available for some desired plant species. In these situations, ASTA suggests the use of Non-Released Plant Material.

The use of Local Native, Non-Local Native, or Introduced Plant Material depends upon the goal of the Land Rehabilitation project. The use of a single one of these categories or combination of them is acceptable as long as it promotes the goals of the Land Rehabilitation project.

ASTA recognizes that, even though Land Rehabilitation differs from Land Restoration, the two may intergrade, and Land Rehabilitation may become Land Restoration at a later date. This change in objectives may be directed by a combination of influences such as land management practices, reintroduction of Local Native Plant Materials, or by natural ecological processes.

**Plant Materials for Land Reclamation:** Because Released Plant Material has been selected for certain traits and tested under different protocols, ASTA advocates the use of Released Plant Material over Non-Released Plant Material when the goal is Land Reclamation.ASTA considers the use of Local Native, Non-Local Native, and Introduced Plant Materials acceptable as long as they assist the land manager in attaining his goals.

**The Need for Flexible Objectives when Designing Land Repair Projects:**

For all cases of land repair the goal of the project should be the reestablishment of a functional ecosystem. If, when designing the project, the land manager finds it

economically or ecologically impractical to attain his goal of Land Restoration, Rehabilitation, or Reclamation, ASTA suggests changing goals to another land use objective. Failure to be flexible and to reevaluate objectives could result in complications from other environmental perturbations, such as the establishment of invasive weeds or pollution of groundwater from erosion.

### The Need For Future Research:

ASTA recognizes that the Land Restoration, Rehabilitation, and Reclamation industry has come a long way since its infancy. ASTA also recognizes the need for more research into the development and use of plant materials, as well as Land Restoration, Rehabilitation, and Reclamation techniques. Therefore, ASTA advocates ongoing and unbiased research, incorporating sound scientific procedures into plant materials development and land repair techniques.

Approved by the ASTA Board of Directors

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ASTA Convention

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