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Native Plant Industry Future is High Quality

The native plant industry has a bright future and there is no need to fear the development of guidelines that help verify the genetic origin of native species. The demand for native species for revegetation, stabilization, and reclamation efforts is increasing significantly, and there is a need to clarify the various ways of collecting and multiplying seed stocks.

One way to better understand the forthcoming guidelines is to walk through an example of how the seed of a native species is collected, multiplied, labeled, and sold without compromising the genetic diversity of the ecotype. So let's look at a fictitious ecotype of blue wildrye (*Elymus glaucus*), which we will call "High Sierra". The seed of this particular ecotype will be collected by grower Jones in an area north of Lake Tahoe, in California, at an elevation of 7,000 feet and is adapted to elevations between 6,000 and 8,000 feet.

Jones is interested in selling **Source Identified Seed** to the

U.S. Forest Service. Source Identified Seed is seed collected only from the original area of adaptation and sold without cultivation (Fig. 1). While collecting his seed, Jones identifies the collection site for the California Crop Improvement Association and is issued a source identified tag. The tag will be attached to each bag of seed to ensure source identification (Note: This program will be offered in 1997).

Because Source Identified Seed is not cultivated, Jones must return to the original site to collect seed if he wishes to sell additional "High Sierra" seed. Although Jones can sell Source Identified Seed for planting anywhere, the seed should perform best in the area of original collection. Because this is wildland collected seed, California state law does not require Jones to provide a purity and germination analysis tag and purity and germination will generally be lower than if the seed were cultivated.

Jones, however, is so impressed with his Source Identified ecotype of blue wildrye that he also wants to cultivate/produce his own seed under the name "High Sierra". He can produce this seed in two ways: as **Common Seed** or as **Certified Seed** (Fig. 1). Jones may prefer to cultivate/produce Common Seed because of the lack of standards for multiplication of

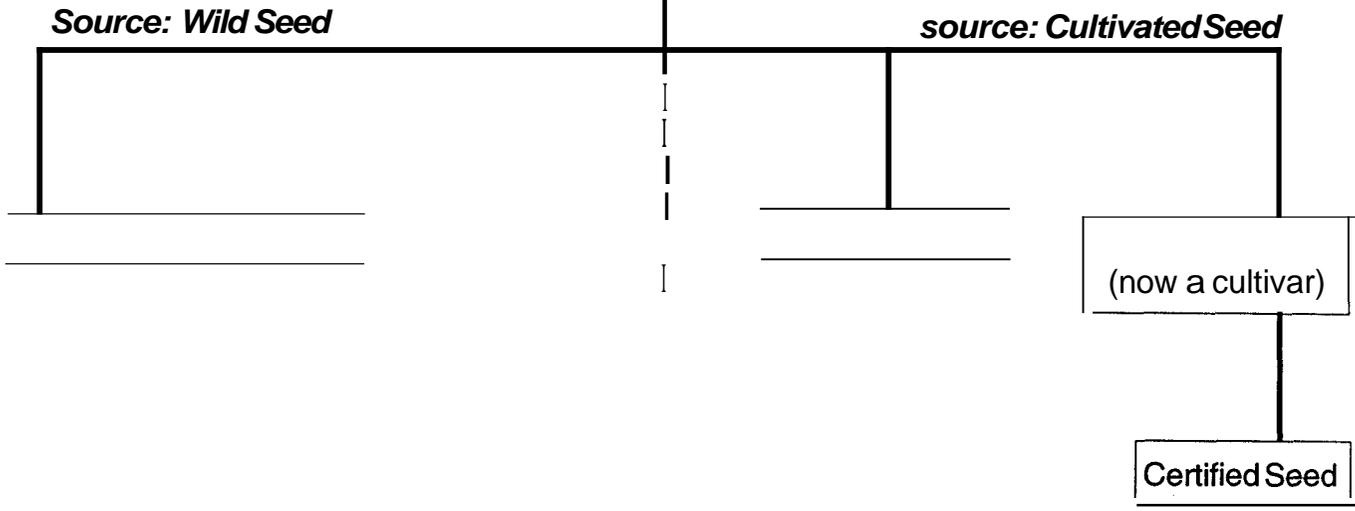
Common Seed. Ethically, however, he must always return to the original collection site for breeder seed in order to maintain ecotype purity. Because he cultivates the seed, Jones now must provide a purity and germination analysis tag, and he is bound by "truth in labeling" to provide accurate information.

After a few years of growing Common Seed, Jones recognizes that "High Sierra" blue wildrye has identifiable and reproducible characteristics that he would like to market, so he decides to cultivate/produce Certified Seed. After collecting data that supports his claims and identifying his original collection, Jones meets with the California Crop Improvement Association to enter his cultivar in their certification program.

The original seed collection is called Breeders Seed, and this seed must be maintained, either in storage or by additional collections from the original collection site. Jones plants a portion of the Breeders Seed to produce Foundation Seed (Fig. 1), and the California Crop Improvement Association assists him in maintaining the superior crop characteristics that he wants to market.

Ordinarily, Foundation Seed is used to produce Certified Seed for commercial sale. If Jones' crop of "High Sierra" meets agreed

Wild Seed on Site *



* Seed source for Source Identified Seed and Breeders Seed for Common and Foundation Seed)

upon purity and germination standards, the Crop Improvement Association will provide Jones with a blue certified seed tag. The tag is attached to each bag of seed to indicate that standards have been met. Because Jones cultivated this seed, California state law mandates that Jones also provide a purity and germination analysis tag (Note: In California, flower seed, either source identified or cultivated, does not require an analysis tag). Purity and germination will generally be higher in Certified Seed than in Source Identified Seed.

As the example above illustrates, growers have several options for collecting, producing, and marketing their seed. Each option has advantages and disadvantages to be considered.

Quality Standards

Federal, state, and county agencies involved in reclamation efforts are increasingly interested in purchasing native plant species. These agencies are demanding high quality seed with identifiable sources. Therefore, it is important that seed quality stan-

dards be developed. The USDA Natural Resources Conservation Service and the California Crop Improvement Association are currently developing source identification and certification standards for California native grasses. These programs will be offered in early 1997.

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