BEST MANAGEMENT PRACTICES FOR NATIVE SEED PRODUCTION

Seed Quality is Now More Important than Ever

Native seeds have the potential to directly affect production agriculture and conservation efforts throughout the states. There is no doubt that native seeds help farmers achieve their conservation and production goals. However, it is critical that seed producers ensure seed purity as well as quality.

As all seed professionals know, quality seed doesn't just happen. Stages of production include choosing the appropriate species; constantly managing production to reduce impacts from diseases, pests and weeds; properly cleaning and handling seed to maintain quality and performance; and testing to ensure high-quality standards are met. Experienced seed companies also work to ensure the best seed for the local geography, climate, and other environmental challenges that impact success.

The American Seed Trade Association (ASTA) has prepared "Best Management Practices for Native Seed Production" to assist seed producers to maintain the integrity of their fields and gain maximum production results. It is designed to serve as a reference document for companies developing individual quality management practices, operating procedures and disciplines consistent with the respective research, development and seed production systems of the entities involved. It is equally as important that the seed buyer be knowledgeable about the seed used in production. As such, this document is for distribution throughout the industry for use as reference by seed producers and seed buyers alike.

Consider ASTA your resource as seed issues arise.

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Best Management Practices for Native Seed Production

1. **Written Procedures:** Establish written procedures and documentation for seed production. Maintain records of employee training, field mapping, weed presence, equipment use and cleaning, and phytosanitary risks.

2. **Seed Sourcing:** The goal of seed production is to produce genetically viable, pure seed. Verify seed identity for purity.

3. **Site Preparation:** When choosing a site for preparation, know which weeds are already present in the soil. Consider a one- to two-year rotation of agronomic or cover crops to mitigate weed presence. Also consider the use of appropriate herbicides as an alternative to soil tillage. The goal of site preparation is a clean field. If applicable, establish an isolation distance between a prepared field and non-prepared land.

4. **Weed Control:** Weeds compete with native plants for resources, and the presence of weed seeds can contaminate a seed crop if it occurs during harvest. Before planting, scout fields for the presence of weeds, and remove as necessary. Use appropriate herbicides, and consider other methods of weed control such as weed fabric, mulching, and hand weeding when traditional control methods are unavailable. Ensure borders are maintained between adjacent fields to decrease risk of cross-pollination from weed seeds.

5. **Pest Management:** Be mindful of plant pests in native seed fields. Take appropriate steps to remove insects, utilizing insecticides when appropriate.

6. **Roguing:** Roguing refers to removing plants with undesirable characteristics from fields to preserve crop purity.

7. **Harvest:** If harvesting mechanically via swathers, seed strippers, or combines, ensure your equipment is clean and free of weed seed both pre-and-post harvest.

8. **Equipment Cleaning:** Establish cleaning procedures for all equipment used during seed harvest. This should be done pre-harvest and post-harvest to ensure unwanted seed is not present. If weed seed is found during cleanout, ensure it is destroyed and clean equipment again.

9. **Seed Cleaning:** Several different factors determine the amount of seed cleaning needed, including harvest method, desired purity, and seed characteristics. The first step of cleaning (threshing) can be done via machine or by hand. After threshing, most seeds will require additional cleaning to remove excess awns, hairs, and other extraneous materials.

10. **Seed Conditioning:** Utilize the appropriate equipment to remove the extraneous materials that are lighter than the seed, thus cleaning the remaining seeds to a high level of purity.

11. **Seed Storage:** If stored properly, many native seeds will maintain high viability. Proper storage will also slow the decline of germination rates. Seed should always be kept in a cool, dry, rodent-proof facility.

12. **Container Cleaning:** Ensure seed containers are properly cleaned prior to seed harvest. Closing mechanisms for seed containers should function so seed cannot be contaminated once in the containers.

13. **Testing:** Pursuant to the Federal Seed Act, all seed sold must be tested for germination and purity. A copy of the test results and sample of the seed should be maintained by the company.

14. **Labeling:** Seed producers must follow guidelines in the Federal Seed Act when labeling seed. The presence of any seed comprising five percent or more of the seed mix must be clearly stated on the label. All seed offered for sale must comply with state requirements for purity and germination testing. These results are conveyed on the seed tag.

Works Cited

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