AMERICAN SEED TRADE ASSOCIATION

The Practice of Coexistence in the Seed Industry: ASTA Principles

This document provides an overview of how the U.S. seed industry has, and is, practicing coexistence. It provides a statement of the basic principles that the U.S. seed industry has used with respect to coexistence. The document should be used in conjunction with the ASTA paper, "Existing U.S. Seed Industry Production Practices that Address Coexistence," and the ASTA Guide to Seed Quality Management Practices.

Definition of Coexistence

The practice of growing, reproducing and handling seed products with different characteristics or intended markets with the goal of successfully achieving intended product integrity and maintaining the economic value of such products.

U.S. Context

- The United States is the largest producer and exporter of planting seed.
- The United States is the largest exporter of agriculture commodities.
- The United States is one of the largest producers and exporters of identity preserved crops, including organic, conventional and specialty crops (such as food and tofu grade soybeans and specialty oil crops).
- The United States is the largest producer and exporter of crops produced through biotechnology.
- The United States is a world leader in developing and applying new technologies to agriculture.

Seed Quality Standards

- The importance of seed quality and product integrity has been recognized by the industry since its inception.
- Tracking, recordkeeping, testing and other measures with appropriate management systems are essential parts of product development and the commercial life cycle for purposes of quality assurance and seed product integrity (See ASTA Guide to Seed Quality Management Practices, www.amseed.org/news_seedquality.asp).
- Maintaining a seed variety's trueness to type is critical for market acceptance.
- Robust quality management practices are used for seed product development, production and distribution.
- Quality standards are based upon market expectations and the limits of biological systems. Therefore, thresholds or tolerances are a component of seed quality standards.

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The Importance of Cooperation

- Cooperation among seed developers, seed producers and growers at the local field level, particularly communication among neighboring growers, is necessary for successful coexistence.
- Third parties, including the public sector, have historically played an important role in validating product integrity and facilitating coexistence at a field planting level.
- Communication along the value chain is necessary for understanding and developing reasonable market expectations.

Coexistence: Underlying Principles

- Coexistence is driven by market conditions and demands and is not related to the safety of food, feed or the environment.
- Historically, in specialized production sectors, the growers and the rest of the value chain take responsibility for meeting any quality standards to address the market demand for that product, often through contractual arrangements.
- Coexistence enables choice for seed growers and the ability of the seed industry to provide a wide range of products to the downstream supply chain and consumers.
- Coexistence management practices will be dependent on a number of factors including the crop, the region and the growing environment and should be consistent with commercial practices along the supply chain.
- Quality standards, both domestic and international, exist for seed production and provide the basis for industry practices related to coexistence.
- Some level of variability is inherent in any biological reproductive system and is reflected in applicable quality standards.
- Coexistence is not just a biotechnology issue. Different agricultural production systems have been successfully practiced in proximity to one another for many years and in many parts of the world.

Common Industry Practices

- Please see ASTA's paper, Existing U.S. Seed Industry Production Practices that Address Coexistence, at www.amseed.org/news_Coexistence.asp.

Seed Quality Management Practices

- Please see ASTA's Guide to Seed Quality Management Practices, at www.amseed.org/news_seedquality.asp.

Questions and Answers

Is coexistence possible?
Yes, different agricultural production systems have been coexisting for decades. Co-existence has been accomplished through sensible, local and regional, farm level practices such as separating crops by distance, time (season) or both, minimizing physical seed mixing, and respecting and communicating with neighbors.

How does coexistence work today?
The fundamental components of coexistence are communication and cooperation. Tools that are used by the seed industry to facilitate this communication and cooperation include field isolation "pinning maps," the use of contracts, seed quality management systems and grower communication about the areas of planting. Please see ASTA's paper, Existing U.S. Seed Industry Production Practices that Address Coexistence at www.amseed.org/news_Coexistence.asp.

Why is there a need to update or even address this issue?
Although coexistence is not new to the seed industry, the growth in biotechnology and organic seed sectors and preferences in some markets for "non-biotechnology" products have brought increased attention to coexistence. In addition, the increasing fragmentation of end use markets and the emergence of specialty use products highlight the importance of coexistence.

What role can government play in coexistence?
Coexistence is market-driven and is not related to safety. Those regulations that address biosafety need to continue to focus on safety and be science based. On the other hand, regulations such as the Federal Seed Act (FSA) do play a role. The FSA regulates the interstate shipment of agricultural and vegetable seed. It requires that seed shipped in interstate commerce be labeled with information that is truthful and allows seed buyers to make informed choices.
Quality standards for variety identity and purity establish a percentage of unintended mixing of other seed varieties, called "off-types," while maintaining product integrity.
Additionally, government policies on Low Level Presence are key to setting realistic parameters for coexistence related to biotechnology, organic and conventional agriculture.

Crop isolation is an important factor to coexistence. How are isolation distances in seed production established? What bodies and organizations currently set and monitor seed quality standards?
In the United States, both the Association of Official Seed Certifying Agencies (AOSCA) and the OECD Seed Schemes establish minimum standards for varietal purity and recommend minimum standards for seed quality. Both of these organizations establish isolation distances to be applied to seed production fields and the number of field inspections to be conducted.

How does the seed industry proactively manage the quality of seed production?
Normally, seed production is managed through contractual arrangements with farmers. Those contracts stipulate the quality standards that must be met, such as specific instructions to reduce the risk of off-types, the purity standard the seed lot must meet, and the purity testing procedures.

What are some examples of coexistence working?
There are many examples of coexistence working—please see ASTA's paper, Existing U.S. Seed Industry Production Practices that Address Coexistence at www.amseed.org/news_Coexistence.asp. This paper describes examples of coexistence, such as the production of different types of sorghum hybrids, the use of pinning maps for seed production in California and the production of alfalfa seed for different export markets.

Is pollen movement the only concern in regards to seed quality/product integrity?
No, pollen movement is not the only parameter for seed quality management. Physical mixing is an important consideration. For example, care must be taken to ensure that physical processes such as planting preparation, harvest, seed cleaning/conditioning and subsequent storage do not compromise either seed quality or integrity. Please see ASTA Guide to Seed Quality Management Practices at www.amseed.org/news_seedquality.asp.

How is coexistence related to the regulatory process for products of biotechnology?
As mentioned previously, coexistence is market-driven and is not a safety issue. It is important that the biosafety regulatory processes for products of biotechnology be focused on the evaluation of safety. Marketing and economic considerations that are unrelated to safety should not be addressed as part of that regulatory process.

What is identity preservation?
Identity preservation is a system that preserves the value of a product throughout its production chain. By their nature, seeds are identity preserved. Historically, in specialized production sectors, the growers and the rest of the value chain take responsibility for meeting any quality standards for the product's market demand, often through contractual arrangements. As with quality standards, identity preservation recognizes variability in the system and therefore allows thresholds or tolerances.

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