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Membership

2	Message from ASTA Officers
6	About ASTA
8	Legislative Affairs
16	International Marketing
24	Public Relations
26	Membership Services
27	Conferences
28	Division and Committee Activities
29	American Seed Research Foundation
30	National Council of Commercial Plant Breeders
31	Sources of Revenue
32	ASTA's New Headquarters
	<i>Inside Back Cover: Board of Directors and Staff List</i>



# contents



# the winds of change

## Power the Seed Industry



2

When civilization emerged nearly 10,000 years ago, about 80 percent of the population was directly involved in agricultural production. Today, less than three percent of the population produces crops in most industrialized countries, yet more food is produced now than ever in history. Farmers moved from the digging stick of early seed planting to the seed drill in the early 1700s to mechanization in the late 1800s and 1900s. Then came hybridization in the 1930s and early applications of modern biotechnology in the 1970s. By the 1990s, genetics had become the new foundation of agriculture. Today, genomics—the mapping of entire genetic structures—and application of recombinant DNA technology to control gene activity and expression in plants are influential forces. In the past ASTA fiscal year (July 1, 2000 to June 30, 2001), these “winds of change,” the theme of the 2001 Annual Convention, continued to impact the seed industry.

Since earliest recorded history, wind power has been used to move ships, grind grain, and pump water. Traditional windmills, mostly used to pump water for farms and ranches in the late 1800s, are in limited use today, but they made way for modern wind turbines. The latter are often grouped together in a single wind farm to generate bulk electrical power. Electricity from these turbines is distributed to consumers just as it is from traditional power plants, but modern wind technology takes advantage of advances in materials, science, and engineering.

Similarly, biotechnology applications by humans date back to 1800 B.C., when yeast was first used to leaven bread and ferment wine. Such traditional applications remain the baseline for food and crop development today, however, people now know how to use microorganisms and crossbreed plants to their advantage in a much more precise and targeted manner. Traditional cross-breeding continues to produce crops with desirable traits. Modern biotechnology simply expedites the time-tested process by allowing for the direct insertion of genes to produce desired traits in plants as opposed to backcrossing hybrids for several years. Moreover, modern biotechnology allows for the use of genes that come from unrelated species, greatly increasing genetic resources. It takes advantage of advances in genetics, biology, and laboratory materials. Just like wind farms, crops are grouped in farms to generate bulk energy in the form of food and feed.

All electric-generating wind turbines, no matter what size, are comprised of a few basic components: the rotor, electrical generator, speed control system, and tower. Likewise, associations are comprised of a few basic elements: staff and officers (rotor), members (electrical generator), value-added services (internal control system), and headquarters (tower). Just as a wind turbine rotor does no good unless it produces electricity, ASTA is not very effective without the energy and input of its members. We generate electricity; ASTA serves as a rotor, monitoring the changing directions of the wind that blows in Washington and elsewhere on seed policy, science, and industry issues. ASTA relays wind directions to us through its meetings, programs, services, and communication and advocacy efforts.

ASTA, which began with a meeting of less than 40 seedsmen in 1883, now represents both seedsmen and seedswomen from about 900 member companies of all sizes from all over the world. The association has gradually shifted its domestic focus to a global one. The world we live in today requires all companies to think more strategically about their businesses and to develop new ways to market and improve their products.

ASTA's 2001 Annual Convention in San Antonio, held in conjunction for the first time with the Mexican Seed Trade Association (AMSAC), underscored this global movement of the seed industry. "The Winds of Change" theme illustrates the need for us to continually adapt to change, which is constant and variable like the wind. Just as a windmill operates regardless of wind direction, we must adapt to changing directions, keeping up with new technology, business advancements, and globalization.

The quest for better seed, which bears traits for efficiency in production and increased crop value, is an ongoing process. Hence, ASTA's mission to produce better seed for better crops for a better quality of life remains constant. Embracing policy with the strength of science also remains essential. But the ways in which seed is produced and distributed change with improvements in technology and access to new markets.

The short-term outlook for seed exports is clouded by political and technical issues involving biotech crops and the adventitious (unintentional) presence of biotech material in traditional seed. Hence, calling for global standards of tolerance for adventitious biotech presence and acceptance of seed produced from new technologies remained high priorities for ASTA this past fiscal year. Other priorities included advocating intellectual property rights, preventing beneficial plant species from being labeled "invasive," obtaining funding for genetic resource conservation, and increasing communication on seed issues and ASTA activities with members, food and commodity groups, and other external audiences.

4 Long-term, export prospects are better than ever with the opening up of new markets and implementation of favorable seed policies among trading partners. The combination of superior genetics and seed production will make U.S. seed the source of high-quality crops and enhanced world food security. The challenge of feeding the projected 8 billion people in the world by 2020 creates a long-term opportunity for the U.S. seed industry to foster global trade.

ASTA continues to enhance the free movement of seed across local, state and international boundaries. We also continue to support sustainable agriculture and protection of the environment. Our motto, "first—the seed," connotes the seed industry's position in nature. Our views are based on sound science and generations of practical experience.

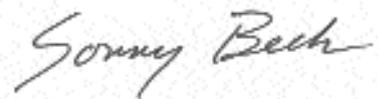
Member companies also garner success from these factors, measured by our ability to deliver customer value. The free market system rewards profitable companies, no matter what their size. Customer satisfaction will always be the primary driver of successful companies. Similarly, member satisfaction will always be the key to ASTA's success. We hope this annual report conveys the value of your membership.



Nathan Boardman  
*President*



Drew Kinder  
*First Vice President*



Sonny Beck  
*Second Vice President*



North.  
East.  
South.  
West.

*The wind blows in  
various directions...*

So move the changing  
times of today,  
the age of the  
“gene revolution,”  
a continuance of  
genetic advancements  
that began with the  
Green Revolution.

The seed industry’s adoption  
of these advancements has  
changed the dynamics of the field.

*The winds of change in 2000-01  
continued to move the industry.*

## Who We Are

Founded in 1883, the American Seed Trade Association (ASTA) is one of the oldest trade organizations in the United States. Its membership consists of about 850 companies involved in seed production and distribution, plant breeding, and related industries in North America. As an authority on plant germplasm, ASTA advocates science and policy issues of industry importance. Its mission is to enhance the development and free movement of quality seed worldwide.

## First-the Seed

ASTA's motto, "first—the seed," expresses the basic premise that underlies the seed industry: there is no substitute for quality seed, a fact of life dating back to the early settlers who knew it as the difference between survival and disaster. Quality seed is essential for growing quality crops.

## Our Mission

ASTA's mission is to be an effective voice of action in all matters concerning the development, marketing and free movement of seed, associated products and services throughout the world. ASTA promotes the development of better seed for better crops for a better quality of life.

## What We Do

ASTA, directed by its members, is involved in nearly all issues relating to plant germplasm, focusing on three areas of industry importance:

*regulatory and legislative matters at international, national and state levels;*  
*new technologies impacting all crop species; and*  
*communication and education of members and appropriate public audiences regarding science and policy issues affecting the seed industry.*

Activities include enhancing the visibility of seed issues in the public arena; lobbying for industry-wide positions on legislation; informing members about environmental and conservation issues and new developments in plant breeding, such as the use of modern biotechnology; conducting conventions and meetings to inform members about seed issues and to encourage fellowship among seed professionals; promoting global sales of U.S. seeds; funding select seed research programs; and maintaining positive working relationships with related professional organizations.

about



## Our Objectives

ASTA works to:

*provide a strong, effective voice in support of the seed industry's interests;*

*inform members about research developments, industry trends, legislation, and regulations—most everything that can affect seed business and its profitability;*

*provide a forum for sharing ideas, information, opinions and concerns with professionals who have mutual interests; and*

*provide services and professional development programs specific to the seed industry that may not be available from other trade associations.*

## Membership

ASTA has about 850 member companies, including roughly 550 active members directly involved in seed production and/or distribution, 25 corresponding members that produce or distribute seed outside of North America, 85 affiliate members that are related associations and agencies, and 200 associate members that provide products or services to the seed industry. Most active, affiliate, and associate members are headquartered in North America, predominantly in the United States. ASTA values and promotes diversity of membership, in terms of company size, products and geographic area served. Each active member company is given one vote, regardless of size.

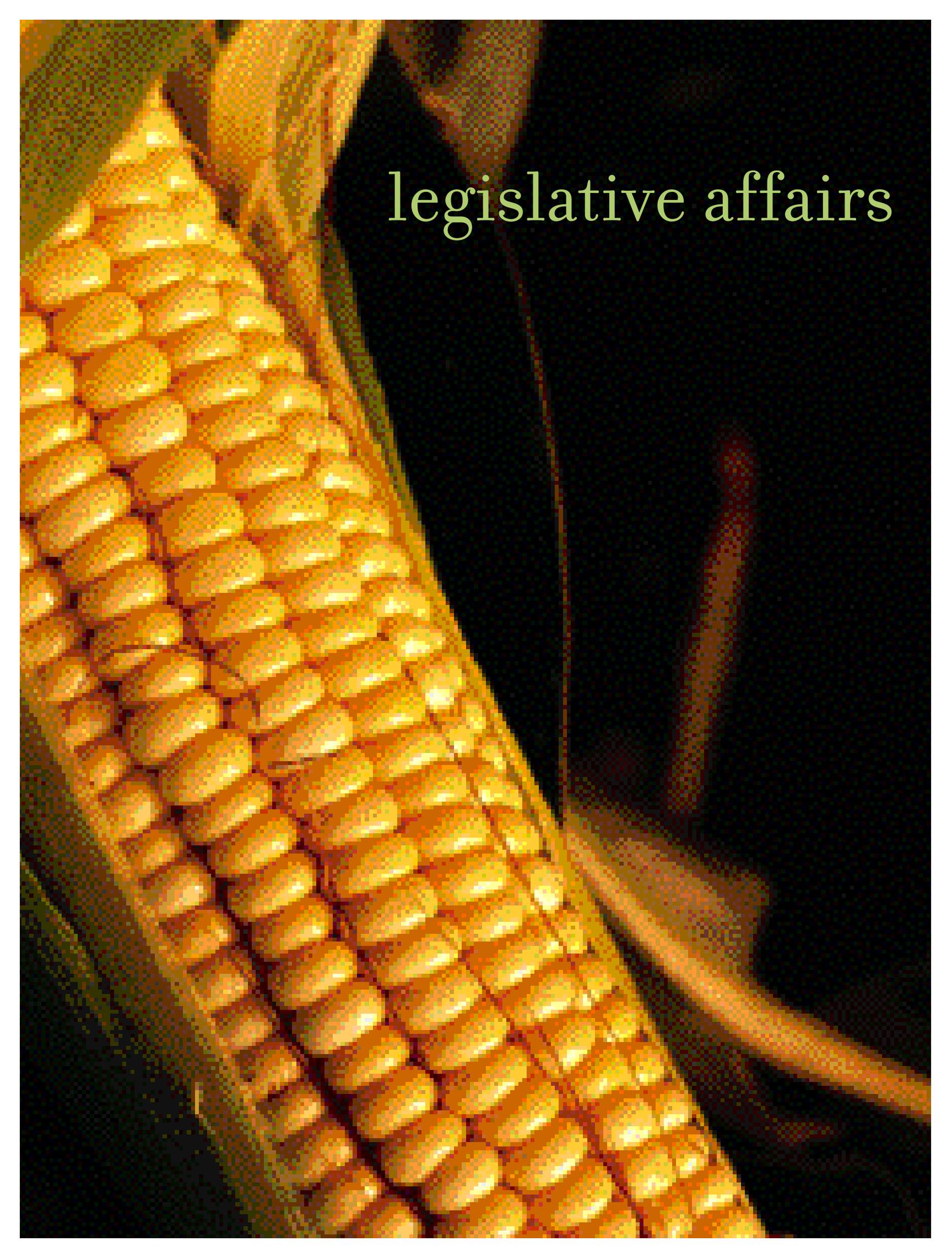
## Leadership

ASTA is driven by its membership, which is represented by a board of directors comprised of a 15-member executive committee, all living past-presidents of the association, division chairs, chairs of the International and Legislative & Legal Concerns Committees, up to three directors-at-large, and ASTA representatives to the Canadian Seed Trade Association and Mexican Seed Trade Association. The executive committee is comprised of the association's president, first vice president and second vice president; three most recent past-presidents; regional vice presidents representing the U.S. northeast, southeast, southern, central, north central, northwestern and western regions; and vice presidents from Canada and Mexico.

## Committees and Divisions

Most issues are driven bottom-up from member representatives on ASTA committees or divisions. ASTA has seven divisions to which any member can belong, including: Associate Members, Brokers-Agents, Corn & Sorghum, Farm Seed, Lawn Seed, Soybean, Vegetable & Flower Seed. Each division has its own governing body and committees pertaining to division meetings and activities.

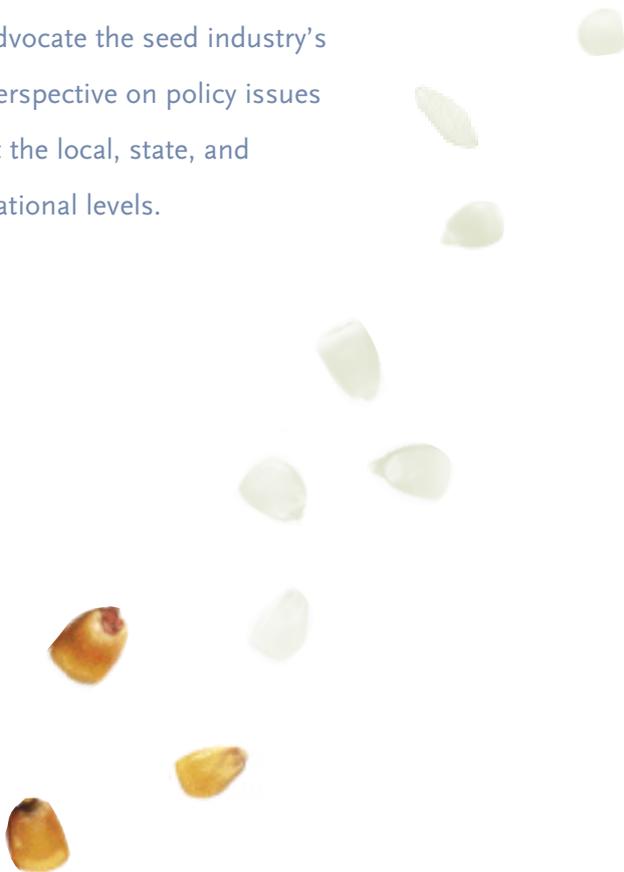
ASTA has nine standing committees addressing key seed science, policy, and education issues. They include the Biotechnology, Intellectual Property Rights (with Variety Identification Subcommittee), International (with its own executive committee, members, and Phytosanitary Subcommittee), Legislative & Legal Concerns, Management Skills, Membership, Public Research Advisory, Seed Industry Relations, Seed Treatment & Environmental, and Trade Rules Committees as well as the Wildflower and Native Plants Group.

A close-up photograph of a corn cob, showing the individual kernels in detail. The kernels are a rich golden-brown color and are arranged in neat rows. The background is dark and out of focus, highlighting the texture and color of the corn.

legislative affairs

ASTA continued in the past fiscal year its leadership on key issues of industry-wide importance, namely, agricultural biotechnology, intellectual property rights, invasive species, and plant genetic resource conservation.

In addition to staff activities, grassroots efforts by ASTA members were key in helping advocate the seed industry's perspective on policy issues at the local, state, and national levels.



## Biotechnology

### Cry9C Protein

The discovery of adventitious Cry9C protein (StarLink™) in non-StarLink™ corn varieties and food products in the fall of 2000 presented several challenges to the seed industry and all stakeholders in the food chain. Since the Cry9C protein had not been approved for human food use by the Environmental Protection Agency (EPA), it was critical for all stakeholders to work together to minimize the presence of the protein in future corn seed and crops. ASTA took a leadership role in helping the seed industry do its part.

This included disseminating corn seed testing and sampling information from the U.S. Department of Agriculture (USDA) to members as quickly as possible; urging members that had not already engaged in testing for the Cry9C protein to do so and to be prepared to provide farmers with written verification of testing; calling upon government agencies to consider seed industry concerns in dealing with the Cry9C situation; polling appropriate members about Cry9C test results to assess the amount of non-StarLink™ seed affected and provide an aggregate number to the USDA; influencing the USDA to establish a purchase program for seed companies not affiliated with the manufacturer of StarLink™ or licensed to sell it, whose seed contained adventitious Cry9C; establishing a member task force to provide input to ASTA and the USDA on biotech seed issues; participating in ongoing conference calls and meetings with commodity and food groups to address marketing issues related to traditional and biotech crops; and communicating all initiatives to members, government officials, stakeholder groups, and journalists (see Public Relations).

ASTA also obtained input from various members involved in corn seed production and distribution to learn how adventitious Cry9C protein could be minimized in future corn crops. Some of these members joined ASTA staff in meetings with government agencies and legislators to outline seed industry concerns related to Cry9C testing and removal of seed with traces of the protein from sales inventories. The input also made for enhanced working relationships with government agencies and food and commodity groups.

The USDA's purchase plan for hybrid corn seed containing the Cry9C protein was initiated in March 2001. This measure ensured that smaller seed companies, whose seed inadvertently contained the Cry9C protein, were not adversely affected. With an estimated cost of \$15 million, the measure was another step by the federal government in a coordinated stakeholder effort to contain the presence of corn seed with traces of Cry9C and ensure that it was not planted. Funding came from the USDA's Commodity Credit Corporation.

While the Cry9C situation was challenging, ASTA noted several positive outcomes from it, including:

.....  
*enhanced recognition of the need to establish globally accepted tolerances for the adventitious (unintended) presence of biotech material in traditional seed;*  
.....

*further development of identity preservation systems, channeling, or other approaches for the orderly marketing of biotech crops;*  
.....

*recognition of shared responsibility across the food chain for marketing products of agricultural biotechnology; and*  
.....

*improved communication between biotechnology trait providers, the seed industry, and agricultural commodity and food groups.*

Moreover, the Cry9C situation influenced the EPA to change its policy regarding the approval of uses for biotech crops. It announced in April 2001 that it would no longer allow partial use permits for such crops.

ASTA noted in its discussions with stakeholders that it is impossible to achieve 100 percent seed purity for any commercial variety due to the fact that seed is living material grown in an open environment. With the existence of biotech crops, it is impossible to guarantee that traditional seed will not contain a minute level of adventitious biotech material. Moreover, since seed is destroyed in the testing process for varietal purity, only a small percentage of a seed lot can be tested. Hence, zero tolerance of adventitious biotech material, which may only be verified by testing 100 percent of a seed lot, cannot be guaranteed.

ASTA continued to support providing as much information as possible to farmers and commodity groups about their seed choices through labeling, meetings, seminars, and other appropriate means. It has always stood for "truth in labeling" as promulgated by the Federal Seed Act. These regulations apply to seed produced by both modern biotechnology and traditional breeding methods. Consistent with the Food and Drug Administration's (FDA's) policy on food labeling, ASTA maintained its position that seed should be labeled based upon its characteristics, not upon the method used to produce it.

ASTA also communicated and coordinated with food and commodity groups on actions related to Cry9C testing and the broader topic of adventitious presence of biotech material in traditional seed. ASTA continued to call for a globally accepted threshold of tolerance for adventitious biotech presence, standardized testing protocols for the detection and verification of biotech material, and an enhanced quality assurance system in seed production to minimize adventitious presence (see International Seed Network Initiative in International Marketing).

### Input on Proposed Policies

As requested in the Nov. 30, 2000 *Federal Register*, ASTA commented, in conjunction with the American Crop Protection Association (ACPA), on what USDA's role should be in facilitating the marketing of grains, oilseeds, fruits, vegetables, and nuts in today's evolving marketplace. The associations noted that if USDA is to have any role in this area, it should only be in accrediting testing laboratories or in certifying the accuracy of test methods, especially for grains and oilseeds, which account for a large portion of certain export markets. Otherwise, ASTA and ACPA would support voluntary, consumer-based marketing systems that are designed, by necessity, to meet the specific demands of buyers and sellers. The associations also noted that effective crop segregation, including identity preservation systems, creates additional costs because of the work required in every step of production from the seed to the farm to the export elevator. As with the current commodity specialty market system, ASTA and ACPA believe that all costs should be accrued by the market segments that want non-biotech grains and other products, not by the government. The associations concluded that industry self-regulation should continue to prevail in the marketing of biotech seed and crops.



ASTA also filed joint comments with ACPA on FDA's proposed mandatory pre-market consultation process with biotech crop developers published in the Jan. 18, 2001 *Federal Register* and draft voluntary guidelines for labeling food made with and without biotech ingredients. Key points were:

.....  
*Although no new scientific information exists that questions the safety of foods produced by modern biotechnology, ASTA and ACPA support the development of the proposed mandatory FDA pre-market review process for such foods.*  
.....

*A mandatory process will further ensure that FDA reviews the safety and quality of biotech foods before their commercialization by a process that is equivalent in many ways to FDA's 1992 voluntary consultation process for food produced from new plant varieties.*  
.....

*Although the FDA's existing voluntary process has worked successfully for years, the proposed new procedures will appropriately modify the existing ones in several ways that will enhance the acceptability of biotech foods in the marketplace, particularly with respect to improving the transparency of the regulatory process.*  
.....

### State Grassroots Efforts

ASTA engaged in policy issues at the state level as well in the past fiscal year. Following the discovery of Cry9C protein in non-StarLink™ corn, several states, most notably New York, Illinois and Indiana, expressed concerns about the marketing and planting of biotech seed.

Grassroots efforts by ASTA staff and members were key in helping allay concerns in these states and bring forth sound science in support of agricultural biotechnology.

In October 2000, New York held a series of public hearings on a proposed five-year moratorium on the planting and growing of biotech crops in the state. Two ASTA members presented testimony at hearings, emphasizing the detrimental affects the bill, if enacted, would have on New York's agriculture, economy, world class scientific and research institutions, and consumer welfare.

When the proposed ban resurfaced in the legislature in spring 2001, additional ASTA members in the state voiced their concerns to many New York legislators. While the fate of the bill remains in question, ASTA members were instrumental in making legislators aware of the devastating affects the ban would have in New York.

ASTA staff and members also participated in key discussions concerning the Illinois Department of Agriculture's 2001 call to cease marketing of biotech seed not approved for all uses in all major markets.

In coordination with the Illinois Seed Trade Association, ASTA provided input in writing and verbally to the state agriculture department on this issue, noting that U.S. farmers should have the right to choose biotech seed and grain handlers to make purchasing decisions based on demand. The U.S. agricultural and food industries must be able to respond to customer and consumer demand for biotech products, operating freely in a competitive free market system.

ASTA also helped defeat Indiana's proposed dollar per bag tax on biotech seed in 2001. Two members provided oral testimony to the state assembly and lended support to Indiana agricultural organizations in the public discussion of the bill.

### Grain Handlers Database

ASTA again hosted the Grain Handlers Database on its web site this past fiscal year to help corn growers locate grain handling facilities that were willing to purchase, receive, and handle biotech grain unapproved for export to the European Union (EU). About 2,000 facilities were listed in the online database at <http://www.amseed.org>. It was updated in time for last year's harvest based on an August 2000 survey of facilities regarding their grain handling policies. Growers were able to find local grain handlers in the database by simply typing in a zip code and citing a specific distance. However, growers were reminded to contact grain handlers prior to delivery to learn of any special handling requirements and to confirm the acceptance of EU non-approved biotech grain.

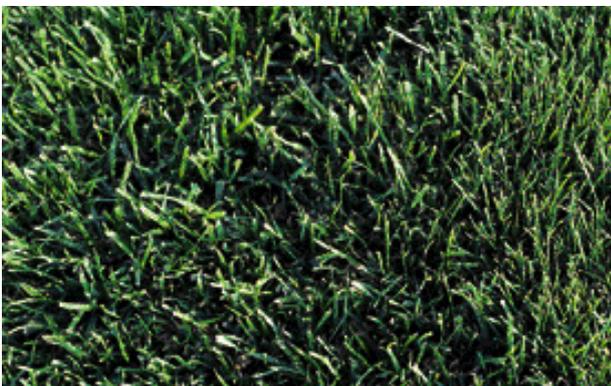
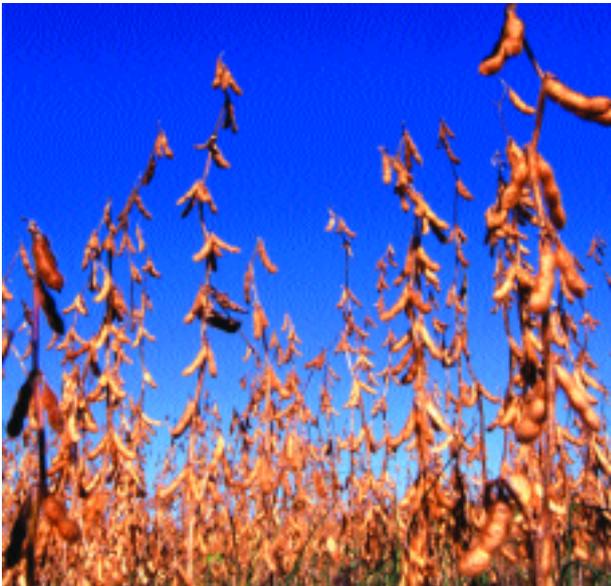


## Intellectual Property Rights

ASTA continued to advocate intellectual property rights (IPR) to seed trade associations and agricultural groups domestically and abroad to enhance protection and development of new seed varieties. ASTA staff participated in annual policy meetings of key groups to foster dialogue and information sharing about IPR. This participation was particularly useful in raising awareness about the benefits of IPR in export markets.

In addition, ASTA had a companion paper drafted in 2001 on the benefits of IPR, including quantitative data and expanded text, to enhance its own position statement. The paper will be used to inform policy-makers and stakeholders about the importance of IPR in the United States and around the world. The paper is available on ASTA's web site at <http://www.amseed.org>.

ASTA public relations and international marketing efforts also advocated IPR to members and international government officials and seed professionals, respectively.



## Invasive Species

ASTA submitted comments to the National Invasive Species Council in November 2000 regarding its draft National Invasive Species Management Plan. The plan seeks to address invasive species—any species not native to an ecosystem whose introduction does or is likely to cause harm to the economy, environment, or human health—in the areas of prevention, coordination, control, response, monitoring, and information sharing.

ASTA made several points in its comments, including:

*Only a few non-native species, according to the draft Management Plan, "cause serious and irreversible harm" and warrant treatment as invasive species. The number of invasive non-native species is very small relative to the thousands of beneficial and benign non-native species found throughout the United States. For example, most of our food crops are non-native species and their value is obvious. An effective invasive species program, therefore, must ensure that invasive species are correctly distinguished from other non-native species.*

*State and local organizations should be given strong leadership and workable tools to help them distinguish truly invasive species from the many beneficial and benign non-native species in the environment. This includes conducting a comprehensive survey of available scientific and risk assessment information, as well as weighing costs and benefits, before classifying a species as invasive.*

*The council must ensure that projects undertaken by state and local authorities are related to bona fide invasive species problems. The disbursement of any federal funds should be limited to those state actions involving species determined by federal authorities to be "invasive," in accordance with the definition of invasive species set out in Executive Order 13112.*

*A successful invasive species program must be based on sound science, including input from stakeholders that have experience with, and knowledge of, invasive plant species, such as seed professionals. Information about invasive species in public mediums, for example, on a web site, must be accurate and of high integrity. All relevant scientific and economic factors must be carried out before a species is identified as invasive.*

ASTA was also active on this issue at the state level in 2000-01. Some state invasive species lists inappropriately included plants beneficial to the seed and agricultural industries. Many of the lists were developed without risk- and science-based analysis or input from key stakeholders. So ASTA made a point of providing necessary input to these states, including Virginia, Wisconsin, Colorado, Oregon, and New York.

## National Plant Germplasm System

ASTA and several member companies protested in writing to these states about listing highly useful agronomic, turf, horticultural, and conservation plant species as invasive.

Some ASTA members also met with state agriculture department officials to voice their concerns. For example, ASTA representatives met with the Virginia Department of Conservation and Recreation, requesting either the de-listing of useful species or proof of their harm. Scores of ASTA members from Virginia and other states, supported the association's efforts with letters to Virginia. The state's Commissioner of Agriculture responded to seed industry concerns by outlining a responsible plan for addressing invasive species in Virginia. He echoed concerns about "overzealous state agencies [that] develop lists without proper input from their clients." Consequently, Virginia has committed to reviewing the useful species on its invasive species list.

In addition, ASTA co-sponsored a workshop in May 2001 with the American Nursery and Landscape Association on the domestic and international movement of plant material that may be invasive. ASTA members gave presentations on the domestic implications of restricting the movement of "invasive plant species" that offer more benefits to agriculture and the economy than risks to the environment.



ASTA continued to advocate the availability of diverse genetic resources worldwide for improvement of plants, prevention of crop losses, and enhancement of food, fiber, and renewable resource production. As the premier organization that acquires, preserves and distributes plant germplasm, the National Plant Germplasm System (NPGS) was put on the radar screen of legislators by ASTA to receive funding for its vital functions. The NPGS is a network of federal and state institutions and research units coordinated by the USDA's Agricultural Research Service. It acquires germplasm, develops and documents information about it, preserves and distributes germplasm, and maintains quarantine facilities for testing imported germplasm for pests and pathogens before introduction to the United States. A steady decline in federal funding in recent decades has had an extremely negative impact on the ability of the NPGS to maintain these essential functions. In fact, to ensure that diverse genetic resources remain available, the NPGS continues to need a big increase in funding.

ASTA pressed for an increase of \$20 million for the NPGS for fiscal year 2001. The Office of Management and Budget reduced this amount to \$5.6 million in the Administration's budget request. ASTA asked for the full \$5.6 million for the NPGS, however, Congress only approved a \$3.9 million increase. This increase doubled over FY 2000, which was \$1.75 million, however, more funds will be needed to maintain the NPGS.

In May 1998, ASTA's Board of Directors passed a resolution to "actively advocate a doubling of the annual budget of the NPGS from its current level of approximately \$20 million to a level of \$40 million by 2002." While nearly \$6 million has been gained, ASTA still has a ways to go to reach its goal. The 2001-02 fiscal year will address this challenge.

The NPGS, as the most strategic mechanism for preserving genetic resources, must be adequately funded to maintain global food security.

## St. Croix Quarantine Site

In November 2000, the USDA spontaneously planned to close its Agricultural Research Service quarantine grow-out site on the island of St. Croix in the U.S. Virgin Islands to reduce operating expenses. St. Croix equipment and employees were going to be transferred to the USDA facility in Isabela, Puerto Rico, where research on quarantined germplasm would have been difficult at best. Such a move would have had a serious impact on the seed industry and companies with winter nurseries in Puerto Rico. Moreover, the potential monetary savings of closing the St. Croix site would not have outweighed the tremendous loss of quarantined germplasm research and cultivation. Fortunately, with input from ASTA and other key stakeholders, the site was prevented from being shut down.

The project at St. Croix has been one of the most successful efforts to increase plant germplasm in the history of the NPGS. Moreover, St. Croix is the only

outdoor site approved by USDA's Animal and Plant Health Inspection Service to introduce prohibited germplasm into the United States. The island was selected as a quarantine site because it is isolated geographically, posing minimal risk for introducing new pathogens into the United States. The quarantine site was created for the safe grow-out of sorghum, maize and other accessions by the NPGS. It has allowed more than 10,000 sorghum and 2,000 maize accessions to move through the system and become available for distribution in half the time that it would have taken otherwise. Under the old system of quarantine grow-out, which took place in greenhouses with small numbers of plants, this accomplishment would have taken from 25 to 50 years. Saving the St. Croix site was key to preventing future loss of sorghum, maize, and other plant germplasm, which is vital to agricultural productivity in many countries.



## National Organic Program

ASTA provided input in 2000 on the USDA's proposed national standards for the production, handling, and processing of organically grown agricultural products, referred to as the National Organic Program (NOP). These proposed standards specified that modern biotechnology methods be excluded in organic seed and food production. While ASTA did not agree with this recommendation, it made points based on the inclusion of these "excluded methods" in the proposed rule. These points were:



*While ASTA supports the development of niche food markets to broaden consumer choice, it does not support mandatory organic production practices for conventional farming and food production practices.*

*The organic label should be carefully designed and written so as not to imply that organic foods are more safe or wholesome than conventional foods. ASTA agrees with the USDA's Agricultural Marketing Service that the NOP is a marketing standard, not a safety or quality standard.*

*When certain circumstances preclude organic food producers from using organically grown seed, annual seedlings or planting stock, the non-organic materials used should be allowed to be produced by modern biotechnology methods.*

*Organic growers should have full responsibility for ensuring that their crop production complies with the organic standards with regard to pollen drift.*

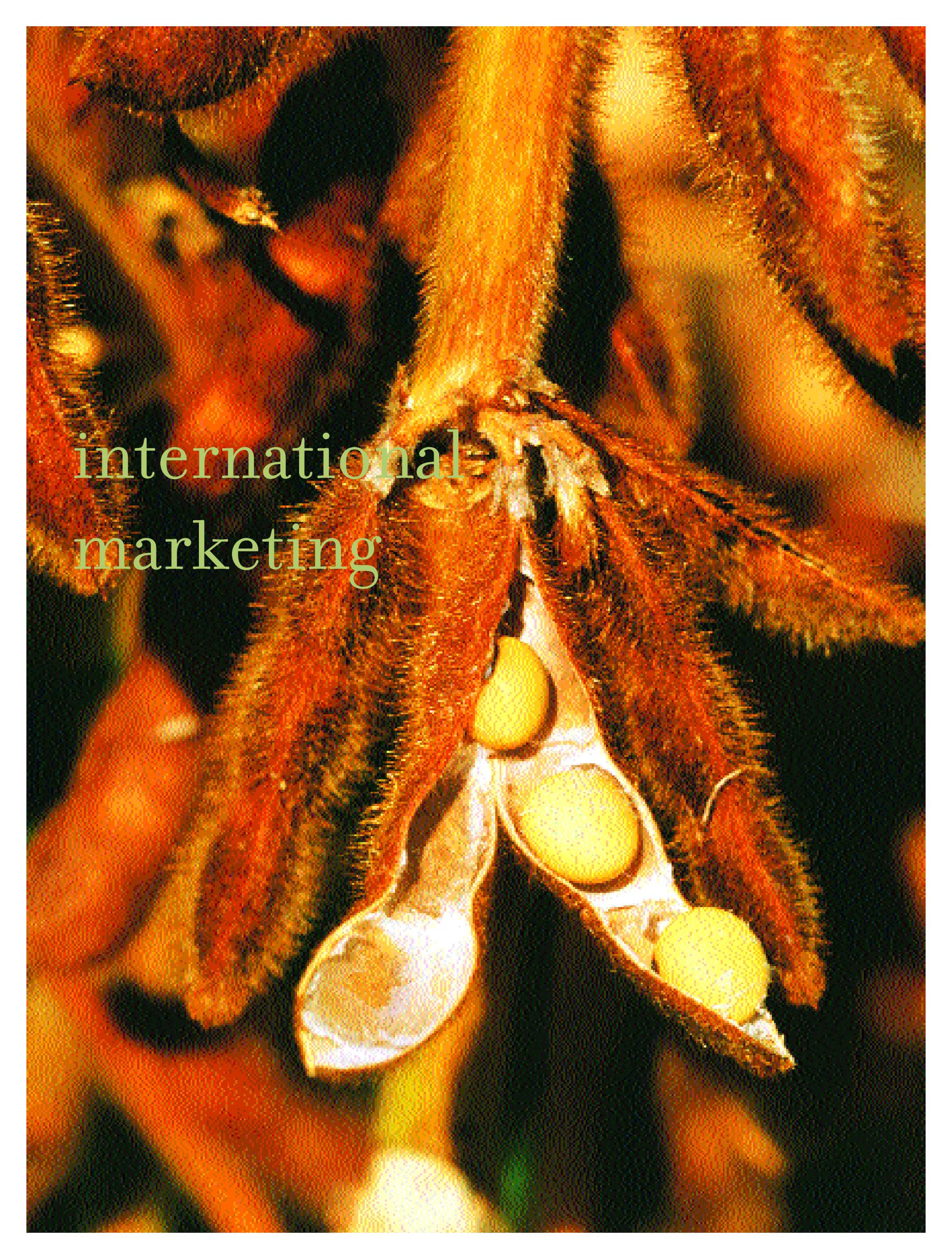
*Products containing less than 70 percent organic ingredients, labeled either "Made with Organic Ingredients" or "Products with Less Than 50% Organic Ingredients," should be allowed to contain ingredients produced by modern biotechnology methods.*

*The USDA certified organic label should be designed and worded differently than the USDA seal used to grade meat and poultry products, so as not to mislead the consumer by likening the organic marketing seal to one used for quality assurance. Label text, such as "USDA Certified Organic Production," should reflect that the organic claims are production or marketing claims, not ones related to safety or quality.*

*The NOP should override state organic standards with the exception of programs that are based on unique conditions or practices particular to a state that necessitates more restrictive organic requirements.*

The national organic standards were finalized in April 2001 and addressed most of ASTA's comments. One exception is that products labeled "Made with Organic Ingredients" (at least 70 percent) are not allowed to include ingredients produced using modern biotechnology methods.



A close-up photograph of a dog's snout, showing its nose and whiskers. A pea pod is placed on the snout, containing three bright yellow peas. The background is a warm, golden-brown color, possibly the dog's fur or a textured surface.

international  
marketing

ASTA's international marketing activities continue to embody the association's mission of "enhancing the free movement of seed around the world." From China to Malawi, these activities span nearly every continent, reflecting the interests of ASTA members involved in international business. Collectively, our members maintain a trade relationship with more than 120 countries worldwide. U.S. exports of planting seed continues to grow, approaching \$1 billion.



ASTA's international marketing staff continually refine market development and access strategies to take full advantage of growing international trade opportunities. They maintain and develop strategic alliances with domestic and international counterparts as well as public and private organizations, including government agencies and land-grant universities. ASTA utilizes synergies in funding with government and non-profit organizations to implement global activities and maximize use of its financial and human resources. By building and maintaining relationships between the U.S. seed sector and international groups, ASTA has increased the viability, sustainability and impact of the U.S. seed industry in the global marketplace.

ASTA remains actively engaged with a number of strategically important countries and international organizations to enhance the global regulatory environment and free movement of seed and new technologies. In the past fiscal year, ASTA primarily worked with the seed sectors in China, Russia, Malawi, and various countries in East and South Africa, South and Central America, and Southeast Asia.

Areas of focus included:

.....  
*policy and regulatory reform related to seed variety registration, seed certification, plant variety protection, and phytosanitary import requirements;*

.....  
*regulatory system accreditation programs;*

.....  
*agribusiness management and seed technology training;*

.....  
*development or improved organization of regional seed associations;*

.....  
*public-private partnerships in seed research to facilitate technology transfer to developing countries;*

.....  
*plant germplasm conservation and distribution; and*

.....  
*national seed sector assessments.*

Adventitious (unintended) biotech material in traditional seed also continued to be a key issue of global seed trade importance in 2000-01. ASTA further advocated the International Seed Network Initiative, first designed in 1999, to address this issue. It also undertook several communication and educational initiatives to better inform its members, government officials, policy-makers, journalists, and food and commodity groups about the need for a globally-accepted tolerance level for adventitious biotech material in traditional seed. The latter will be critical to preventing future disruptions in international seed trade.

Following are highlights of many international marketing activities undertaken in the past fiscal year. Highlights begin with initiatives of global relevance, followed by ones that targeted specific regions or countries.

## Worldwide

### International Seed Network Initiative

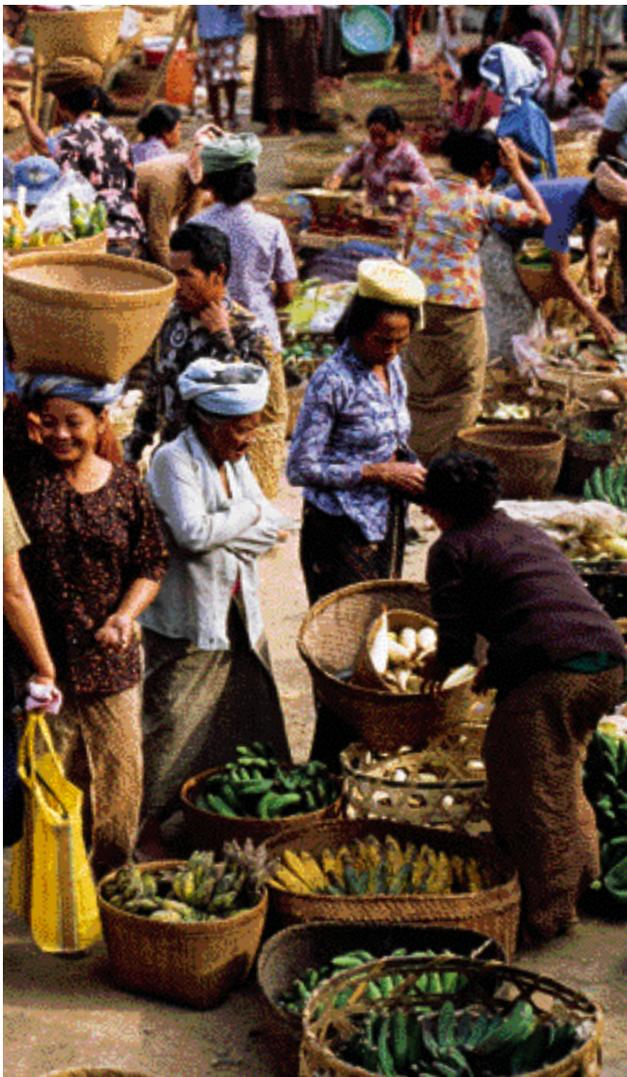
With the increased application of modern biotechnology in crop production, traditional (non-biotech) seed is subject to minute levels of adventitious biotech material. Despite the U.S. seed industry implementing enhanced quality assurance measures and adhering to high varietal purity standards, it is impossible to guarantee that traditional seed moving in international commerce today will not contain adventitious biotech material.

Recognizing that this reality has and will continue to cause disruptions in global seed trade, ASTA continued to press for a globally-accepted threshold of tolerance for adventitious biotech presence in the past fiscal year. A threshold of one percent for adventitious biotech material in maize, cotton, soybeans, and canola was first proposed in June 1999 under the International Seed Network Initiative (ISNI), developed by ASTA and the International Seed Trade Federation (FIS). Since then, ASTA and FIS have tried to garner support for the ISNI from international governments and seed associations.

The ISNI is based on a quality management system that addresses the critical components supporting seed multiplication, seed movement, and technology transfer. It seeks to standardize methods of genetic testing that are accepted by international regulatory bodies and to develop an accredited quality assurance scheme that utilizes an audit-point template for field management, seed testing and seed distribution activity. Proposed quality assurance procedures provide for positive identification, traceability, and control of seed through each step of the production process. Furthermore, the ISNI advocates improved interface and communication between regulatory and seed industry, including access and sharing of seed testing methodology and technology licensing.

In order to increase member awareness of the ISNI, ASTA hosted two workshops about it in October 2000 and April 2001 near Chicago, Illinois. Topics covered in the first workshop were the history and debate pertaining to the ISNI; report of the Organization for Economic Cooperation and Development Seed Schemes meeting in October 2000 in Geneva, Switzerland; European environmental laws and liability; and ways to garner global consensus for the ISNI.

The second workshop, entitled "The Biotech Evolution of the Seed Industry: Adventitious Presence, Quality Assurance and Orderly Marketing," explored potential responses and plans of action to address issues related to the marketing of biotech and traditional seed.



With global seed trade estimated at \$3.7 billion and U.S. seed exports at more than \$800 million, both potentially threatened by the lack of a standard tolerance level for adventitious biotech material, this issue remains at the top of ASTA's radar screen. Seed trade disruptions occurred during the past fiscal year in Greece, Italy, France and Germany due to adventitious biotech presence in traditional seed. While ASTA, in partnership with the USDA's Foreign Agricultural Service, was instrumental in temporarily resolving these disputes through negotiations with government officials, it recognizes that the ISNI will be key to preventing future disruptions in international seed trade.

### Seed Export Testing and Certification

At the encouragement of ASTA, the USDA's Animal and Plant Health Inspection Service (APHIS) proposed in July 2000 to amend its seed export certification regulations to provide specific standards under which non-government facilities can become accredited to perform laboratory seed testing and seed crop field inspection services. These standards will serve as the basis for the issuance of federal phytosanitary certificates, export certificates for processed plant products, and phytosanitary certificates for re-export. APHIS called for public comments on the proposed rule "Accreditation Standards for Laboratory Seed Health Testing and Seed Crop Field Inspection." ASTA recommended the following changes to the proposed rule:

*using the term "phytosanitary inspection" rather than "seed crop field inspection" to encompass inspection of greenhouse or growth chamber seed production in addition to visual inspection of seed prior to certification;*

*including seed sampling for the purpose of laboratory seed health testing as one of the activities that an entity can become accredited to perform;*

*covering visual inspection of seed just prior to export certification in the rule;*

*only requiring facilities conducting seed testing, direct visual examination, and serological tests to have the equipment necessary to perform their respective functions;*

*allowing a plant pathologist to be "on-site" by remote means when required to supervise the evaluation of plant or tissue samples; and*

*allowing both seed testing laboratories and non-laboratory entities that provide phytosanitary inspection services to recoup their expenses by setting appropriate fees.*

### World Seed Congress 2001

ASTA participated in the International Seed Trade Federation's (FIS') and International Association of Plant Breeders for the Protection of Plant Varieties' (ASSINSEL's) World Seed Congress in Sun City, South Africa, in May 2001. The association provided the U.S. seed industry's perspective on issues at almost all FIS section and committee meetings. ASTA also displayed its booth at the congress, promoting ASTA membership and the FIS/ASSINSEL World Seed Congress in Chicago in 2002. The booth was designed to increase ASTA's visibility as an industry leader around the world. ASTA's mission statement and values were prominently featured along with current strategic messages. The booth is used as a visual communications tool at a variety of international conferences, workshops and meetings each year.

## Asia

### China Seed Law

ASTA facilitated the U.S. seed industry's provision of input on a draft Chinese seed law in 2000, which resulted in changes favorable to seed imports. The association arranged for visits of a delegation from the Chinese Seed Law Drafting Committee to U.S. seed companies to obtain input on the language of their draft seed law. Industry representatives emphasized transparency in the law and the importance of plant variety protection. Meetings with these companies and the USDA resulted in China changing some portions of the law that would have been unfavorable to U.S. seed exports there, valued at \$13 million. The new Chinese seed law was officially passed in July 2000. ASTA continues to work with the Chinese government in its implementation of the seed law and other regulations that will help China meet its obligations under the World Trade Organization and sustain permanent normal trade relations with the United States.



## Agreement with China on Maize PRA

In August 2000, ASTA signed an agreement with the Chinese Ministry of Agriculture's National Agro-Technical Extension and Service Center to continue discussion of phytosanitary issues that currently prevent maize seed trade between the United States and the People's Republic of China. The agreement stated that both parties "wish to have cooperation in seed trade, plant quarantine and scientific study" and "would like to maintain and even further strengthen and expand the technical cooperative relations." It was the first step toward removing existing phytosanitary barriers to maize seed trade.

Points included in the agreement called for both parties to:

.....  
*establish an exchange visiting system for each party to learn about the other's business environment and foster commercial exchange and cooperation;*

.....  
*discuss issues related to seed production, trials and extension services from a scientific perspective;*

.....  
*support preparatory activities leading to a possible final agreement to conduct a Pest Risk Analysis (PRA) of maize;*

.....  
*determine feasible projects and create a work plan and detailed budget for conducting a PRA of maize; and*

.....  
*finalize a formal agreement to conduct a PRA by the end of 2001.*

ASTA hopes that the PRA will facilitate maize seed trade and research between the United States and China.

## China Farmer's Daily Articles

In March 2001, ASTA was featured in the Chinese trade publication *China Farmer's Daily* (Foreign Seed Industry Edition), an official state publication that is widely distributed to the highest levels of government, agricultural industry, and farmers at the provincial level. The article was the first in a series designed through a joint agreement with ASTA to inform readers about the U.S. seed sector. It gave a comprehensive overview of ASTA, including its mission, major activities, organizational structure, and values and beliefs. Subsequent articles will discuss the structure of the U.S. seed sector, benefits of the U.S. regulatory system, and importance of access

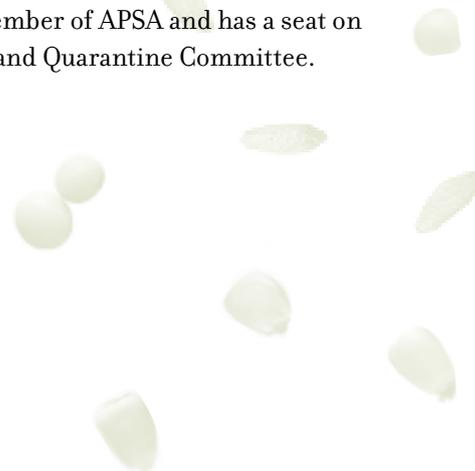
to diverse plant germplasm and new technologies. The purpose of the articles is to influence readers' thinking about their private sector's freedom to operate, government's role in providing oversight of seed varieties while fostering seed sector growth, use of genetics in seed research and development, value of intellectual property protection, and public-private sector collaboration to enhance seed development and distribution.

## Plant Variety Protection Training

Delegates from China, Thailand, India, Vietnam, Philippines, and Sri Lanka were funded by ASTA through the USDA's Emerging Markets Program to attend an ASTA program in the United States during October 2000 on the implementation of the International Union for the Protection of New Varieties of Plants (UPOV) 1991 Convention. The delegates were the primary people involved with implementing the Plant Variety Protection (PVP) system in their respective countries. The program allowed delegates to meet with representatives from the U.S. PVP office, ASTA, Iowa State University's Seed Science Center, and U.S. seed companies to discuss the value of a PVP system. Such a system encourages the protection of plant breeders' rights, improving market opportunities within countries that adopt PVP.

## Asia & Pacific Seed Association

ASTA maintained its relationship with the Asia & Pacific Seed Association (APSA) by participating in APSA's 7th Annual Conference in Bangalore, India, in September 2000. The conference covered new advancements in the seed industry and facilitated business development and seed trade within the region. ASTA provided the U.S. seed industry's perspective on these issues. It also discussed plans to offer PVP training in the United States to delegates from Thailand and China. Other future collaborations between the two associations will focus on regional phytosanitary regulation harmonization. ASTA is an associate member of APSA and has a seat on its International Trade and Quarantine Committee.



## Europe

### Russian Study Tour

ASTA and the USDA hosted high-level Russian government officials and seed industry leaders on a seed study tour in the United States in December 2000. The tour included discussions on the development of a mutually beneficial technical assistance program between U.S. and Russian seed sectors. It helped illustrate to the Russian delegation the benefits of a commercially viable seed industry and the resources available to them through the U.S. seed sector. It also showed how a national industry-government partnership can promote Russian seed and agricultural development. The tour included stops at a grain farm, Purdue University's Center for Agribusiness, a packet vegetable seed plant, ASTA's Corn & Sorghum and Soybean Seed Research Conferences, vegetable seed companies, a biotechnology research facility, and USDA offices.

Objectives of the tour were to inform the Russian delegation about the benefits of modern biotechnology, the U.S. regulatory structure for the seed industry (i.e., truth in labeling, voluntary certification, no registration system, intellectual property rights), seed laboratory testing procedures and purposes, seed conditioning and research, and U.S. seed varieties and germplasm that are adaptable to the Russian environment.

ASTA's work in Russia has created stronger commercial ties between the U.S. and Russian seed industries, improved extension activities that encourage optimal use of new seed technologies, and helped Russian seed associations improve technology transfer mechanisms and acquisition of improved seed varieties. For example, due to ASTA's efforts, the government eliminated registration requirements for U.S. vegetable seed, setting the stage for easier exportation of other U.S. seed. Russian seed professionals also requested ASTA's assistance in agribusiness management training.

### Russian Seed Aid Assessment

ASTA, in cooperation with the USDA's Foreign Agricultural Service, sponsored two seed aid assessment missions to Russia in July and August 2000. The purpose of the missions was to evaluate the success of the USDA-ASTA 1999 and 2000 Seed Aid Programs to the Russian Federation, valued at approximately \$60 million. Feedback obtained during the missions indicated that

U.S. pea, maize, and alfalfa seed donations were well-received there; Russian farmers expressed interest in buying U.S. seed in the future. The aid programs created demand for U.S. seed products and allowed for increased cooperation with seed sector officials in Russia. In addition, the U.S. seed industry benefited through the direct purchase of its seed by the USDA for donation.

### Semena Articles

In March 2001, ASTA was featured in the Russian seed trade publication *Semena* through a joint agreement to publish a series of articles about the U.S. seed sector. The first article gave an overview of ASTA and historical outline of seed production. It also discussed issues related to global seed sales and export and import of U.S. seeds. Subsequent articles will discuss the importance of the U.S. private sector's freedom to operate, government's role in providing oversight of seed varieties with minimal regulations to foster seed sector growth, use of genetics in seed research and development, intellectual property protection, and public-private sector collaboration to enhance seed development and distribution. The purpose of the articles is to influence readers' thinking on these issues as they relate to the Russian seed sector.



## Africa

### Malawi Seed Sector Study Tour

ASTA organized a seed study tour for delegates representing the Malawi Ministry of Agriculture and National Smallholder Seed Producers Association in August and September 2000. Delegates met with representatives at ASTA, Purdue University, Iowa State University's Seed Science Center, USDA's Agricultural Marketing Service, and U.S. Agency for International Development (USAID). Issues addressed were business management strategy, marketing, seed evaluation and testing, seed certification, ways to advance regional and global seed trade, and policies that foster such advancement. ASTA, in conjunction with the USDA, Purdue University, and Iowa State University, submitted a \$2 million proposal in May 2001 to the USAID to carry out activities in regulatory harmonization and reform, private seed sector development, and enhanced technology transfer.

### African Seed Trade Association

ASTA participated in the African Seed Trade Association (AFSTA) Congress/General Assembly in March 2001 in Cairo, Egypt. This was the second congress of the newly formed AFSTA, hosted in conjunction with the Egyptian Seed Association. ASTA, in partnership with USDA and the International Seed Trade Federation, provided the stimulus, technical support, and financial means for the establishment of AFSTA in 1999. ASTA's Vice President of International Marketing continues to serve on AFSTA's Board of Directors.

AFSTA was created to foster the development of a modern and competitive seed industry throughout Africa and encourage private seed sector growth there. Through AFSTA, African countries are able to receive information about U.S. seed technologies and regulatory systems in a free competitive market. AFTSA promotes regional integration and harmonization of seed policies and regulations that are supportive of U.S. seed trade in target countries and regions. AFSTA members can work with their government representatives to develop regulatory systems and intellectual property rights laws to promote private seed commerce.

## South America

### Workshops on Seed Certification Standards

In September 2000, ASTA sponsored workshops in Paraguay on the harmonization of seed certification standards for the expanded MERCOSUR region—including Argentina, Brazil, Uruguay, Paraguay, Chile, and Bolivia. This workshop was the second of a series in the region on seed regulatory harmonization and transparency. The series began with the establishment of accreditation standards in 1999-2000 in Argentina and ended with workshops in Chile and Brazil on phytosanitary reform in February and May 2001. The aim of the workshops was to assist MERCOSUR governments in establishing processes and systems of accrediting private entities to certify seed. In addition to promoting the accreditation concept to important international seed markets, the information will help streamline certification processes for U.S. seed companies that have operations in the MERCOSUR region.

### Pan-American Seed Seminar

ASTA participated in a forum on modern biotechnology and seed marketing for Latin American countries hosted by the Latin American Seed Federation (FELAS) in November 2000 in Punta del Este, Uruguay. ASTA funded a technical program there on agricultural biotechnology. Other topics addressed at the meeting were plant breeding, seed production and trade, supply of high quality seeds, and transformation of the seed industry. ASTA also displayed its booth at the conference, promoting ASTA membership and the FIS/ASSINSEL World Seed Congress in Chicago in 2002.



## FONTAGRO

ASTA and the American Seed Research Foundation (ASRF) continued to work in 2000-01 with FONTAGRO, a consortium of national agricultural research institutions within Latin America funded by the Inter-American Development Bank and Latin American governments' Ministries of Finance. In September 2000, ASTA and ASRF representatives met with FONTAGRO members in Chile, Argentina, Costa Rica, and Brazil to discuss potential public-private sector collaborations in seed research and technology transfer mechanisms throughout the Americas. Such collaborations would have leveraged funding and shared benefit. ASTA continues to support the broad free trade agreement with the Americas.

### Other Activities

Other notable ASTA international marketing activities during the past fiscal year were:

*Continued collaboration with public and private organizations that advance ASTA's international trade policy agenda, especially related to biotechnology and plant genetic resource conservation. Key organizations include the Codex Alimentarius Commission, World Trade Organization, Convention on Biological Diversity, and the International Plant Protection Convention.*

*Coordination of seed trade missions in Moldova, Poland, Russia, Greece, Malawi, Zambia, Mozambique, China, Argentina, Chile, and Costa Rica to collect market intelligence, evaluate technical assistance needs and market potential, encourage adoption and enforcement of plant variety protection laws, and establish regulatory systems that support international seed trade.*

*Continued work with Iowa State University, Purdue University, and Michigan State University (MSU) in the administration of technical assistance programs in China, Poland, the Ukraine, and several countries in Central America, Africa, and the Middle East in order to increase trade between their seed sectors and the U.S. seed industry. ASTA is represented on the board of directors of the Agricultural Biotechnology Support Project, funded by USAID and implemented by MSU to support developing countries' adoption of modern biotechnology in crop production.*

*Continued participation on the USDA's Agricultural Technical Advisory Committee, providing direct input on relevant issues within the World Trade Organization.*

*Enhanced seed regulatory reform in developing countries around the globe through the World Bank, Inter-American Development Bank, and USAID programs.*

*Maintained involvement with the U.S. Agricultural Export Development Council, which represents more than 60 agricultural commodity groups, as a member of its board of directors.*

*Continued leadership on the Seed Industry Advisory Group and Seed Panel within the North American Plant Protection Organization, advancing ASTA's seed health agenda through the International Plant Protection Convention Secretariat.*

*Furthered progress in establishing global phytosanitary standards for seed commerce through its participation in the FIS International Seed Health Initiatives for field crops, herbage and vegetable seed.*

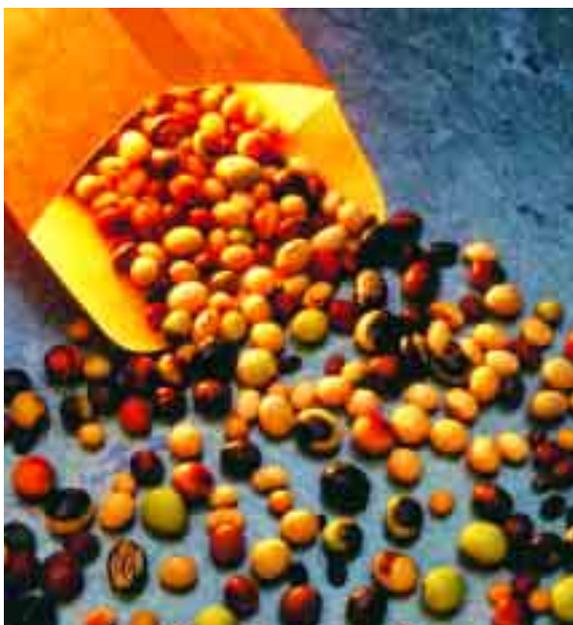
*Submission of proposals for additional funds to implement new international market development and regulatory reform activities in fiscal year 2001-02.*



# public relations

Seeds are the foundation of human and animal life—the foods we eat, fibers we wear, and most of the products we use in our daily lives are created from seed. As living material, seed has tremendous genetic potential; it is the delivery mechanism for new plant technologies and traits. Improved seed and new varieties enhance genetic resources, helping to prevent crop disasters and maximize agricultural production. Global seed trade gives countries access to high quality seed... Better seed produces better crops for a better quality of life.

24



These messages are a few of many developed for ASTA public relations activities in 2000-01. The hiring of a public relations director in March 2000 resulted in enhanced internal and external communication materials and initiatives throughout the fiscal year. Key activities included:

- creation of a strategic plan to foster internal and external communications;*
- development of boiler plate, fact sheet, and talking points about ASTA (see "Who We Are" section);*
- increased written and verbal communication with members, journalists, government officials, and agricultural group representatives on key seed issues, such as the adventitious presence of biotech events in traditional seed, agricultural biotechnology at large, invasive plant species, seed trade, and plant genetic resource conservation;*
- issuance of regular news releases on key science and policy issues and association activities;*
- establishment of news room and consumer news media presence at ASTA Annual Convention and Corn & Sorghum and Soybean Conferences;*
- media training of ASTA's leadership to facilitate external outreach;*
- creation of talking points for media spokespeople and Q&As for members about ASTA and key science and policy issues;*
- revamping of monthly newsletter, renamed INSIDE ASTA;*
- compilation of regular electronic updates and breaking announcements on news stories relevant to the seed industry;*
- production of a booklet on U.S. seeds for international marketing purposes;*
- timely development, maintenance, and tracking of web site content;*
- speechwriting, editing, and editorial writing for ASTA officers;*
- drafting of select policy documents to government officials and commodity groups;*



.....  
*preparation of promotional materials for the 2002 FIS/ASSINSEL World Seed Congress in Chicago, Illinois and coordination of on-site promotion of this meeting at the 2001 Congress in Sun City, South Africa;*

.....  
*contact with agricultural entities, such as the U.S. Department of Agriculture's Communications Office, Agricultural Research Service Center, Federal Seed Laboratory, agricultural and commodity groups, public relations personnel at member companies, university experts on seed issues, and regional/state seed trade associations;*

.....  
*maintenance of ties with the Council for Biotechnology Information, International Food Information Council, National Seed Storage Laboratory, International Seed Trade Federation, Grocery Manufacturers of America, and other agricultural organizations;*

.....  
*handling more than 100 inquiries from journalists on various seed issues, particularly related to agricultural biotechnology and the International Seed Network Initiative. Inquiries ranged from national newspapers such as Le Monde (Paris, France) and The New York Times to radio stations and television networks to consumer magazines like Discover to online media to trade publications, including Seed World, Seed Today, Seed Trade News, and Seed & Crops Digest.*

.....  
*arranging media interviews on various seed issues for ASTA staff and leaders with trade and consumer press, including Voice of America radio network, Fortune magazine, Bloomberg News, and Bridge News.*

.....  
*representing ASTA at select external government and industry meetings, largely focused on agricultural biotechnology and invasive species; and*

.....  
*collaborating with ASTA legislative affairs and international marketing on joint activities.*

ASTA's public relations efforts were particularly successful in raising the visibility of the need to establish global standards of tolerance for the adventitious (unintentional) presence of biotech material in traditional seed to prevent disruptions in domestic and international seed distribution. Awareness was raised through member communication and work with the news media, including major newspapers, radio stations servicing farm communities, and agricultural publications. This issue also garnered significant attention after the discovery of the Cry9C protein from StarLink™ corn in non-StarLink™ varieties. Prior to and after the U.S. Department of Agriculture's March 2001 announcement on its management program for seed testing positive for the Cry9C protein, ASTA appeared in major news stories as the voice of the seed industry. News outlets that contacted the association included the Associated Press, Reuters, Bloomberg News, Dow Jones International, Bridge News, *New York Times*, *Wall Street Journal*, *Washington Post*, *Chicago Sun-Times*, *Orlando Sentinel*, *Minneapolis Star-Tribune*, *Des Moines Register*, National Public Radio, NBC "Nightly News," CBS "Evening News," French TV, Bureau of National Affairs, Berns News Bureau, CyberCrop.com, *Successful Farming*, *Farm Journal*, and other consumer and trade news outlets. Key issues were the estimated amount of Cry9C protein in U.S. corn seed, Cry9C testing prevalence and methods, overall containment of Cry9C, USDA's involvement in containment, and supply and demand of U.S. corn seed, particularly in major export markets.

Beyond Cry9C protein testing and related issues, *INSIDE ASTA* covered association perspectives on the future of the seed industry, 2001 legislative forecast, invasive and "so-called invasive" plant species, permanent normal trade relations with China, intellectual property rights, National Plant Germplasm System funding, U.S. and European views on agricultural biotechnology, and international seed trade. News releases covered science, policy, and business issues related to biotechnology, invasive species, seed trade, and ASTA meetings. Press releases, Q&As, newsletters, news updates, and archived items may be viewed on ASTA's web site at <http://www.amseed.org>.



# member services

ASTA continues to provide value and support to member companies. The membership numbers for the 2000-2001 year reflect the constantly transforming seed industry. Mergers, acquisitions and new technologies have contributed to lower membership numbers, but these changes have created a better informed and more involved membership. Currently, ASTA is 838 members strong, including 543 active members, 188 associate members, 84 affiliate members, and 23 corresponding members.

One of the greatest incentives for new members is the trial membership offer that is promoted by ASTA's Regional Vice Presidents and Associate Director of Membership Services. The promotion allows new members to take advantage of ASTA's services for a full year at a discounted price. The promotion has brought over 15 new member companies to ASTA during the past fiscal year. With the recruitment efforts of the Regional Vice Presidents, that number is growing. ASTA believes that many companies which took advantage of this offer appreciated the extra incentive to join the association. This shows the value and strength of ASTA's member services.

ASTA offers a telecommunication program that provides long distance, conference calling, data and Internet, and other network-based services. This program, sponsored by Broadwing, is utilized by more than 50 companies. Broadwing provides the latest technology at competitive rates, and with ASTA's endorsement, ensures accountability.

Since retirement planning and investment is important to company employees, Prudential Securities offers a full-range of investment services to ASTA members. The program is specifically designed for each company, and Prudential can develop new plans, or work with existing ones to meet each member company's needs. With retirement plan alternatives for small businesses, Prudential continues to provide services to fit any company's needs. Approximately 15 companies participate in this program.

The litigation clearing-house, a collection of court cases and legal precedents, remains an invaluable resource for companies involved in litigation or anticipated legal actions. The ASTA legal counsel, in cooperation with the ad hoc Litigation Committee, have teamed up to assemble relevant information. Members are encouraged to utilize this service and to provide copies of decisions, briefs or any other documents that might be helpful to fellow seed professionals.

The ASTA website, electronic news update, and newsletter continue to provide members with up-to-date information and news pertaining to the seed industry. Members can visit <http://www.amseed.org> to find agriculture-related links, member posted websites and classified ads, archived newsletters and press releases, the latest conference information, and a variety of other industry related materials.

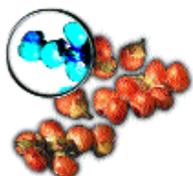
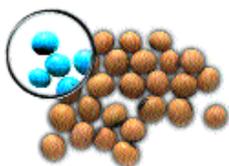
The ASTA Membership and Committee Directory and Annual Yearbook were distributed during the 2000-01 year, remaining invaluable resources for members.



# conferences



ASTA hosted four major meetings in the 2000-01 fiscal year, including its Farm Seed and Lawn Seed Conferences in November 2000, Corn & Sorghum and Soybean Seed Research Conferences and Seed Expo in December 2000, and Vegetable & Flower Seed Conference in January 2001, and 118th Annual Convention in June 2001. In addition, ASTA held two technical workshops on the adventitious presence of biotech material in traditional seed in October 2000 and April 2001.



*"To be or not to be invasive?"* was the question of significant debate about plant species new to ecosystems at the November 2000 ASTA Farm Seed and Lawn Seed Conferences in Kansas City, Mo. The debate featured a pro-exotic plant philosopher and a member of the advisory committee to the national Invasive Species Council, which is coordinating efforts to minimize the economic, ecological, and human health impact of invasive species in the United States.

December 2000 marked the 55th Annual Corn & Sorghum Seed Research Conference and 30th Soybean Seed Research Conference. Combined with the Seed Expo, this joint conference drew more than 3,000 people to Chicago, Ill. The trade show featured 135 exhibiting companies in about 240 booths, displaying the latest in equipment, supplies, and services. The Soybean Conference featured presentations on the public soybean genome project, enhanced soybean oil composition, and South American soybean industry. The Corn & Sorghum Conference covered bioinformatics, the composition and analysis of plant genetic structures; evaluation of tests that detect biotech material in seed; consumer and policy issues related to agricultural biotechnology; use of biotechnology to

improve corn genetics, purity of corn hybrids, and corn starch content; and e-commerce. Both conferences covered the science and regulation of biotech crops and the European perspective on biotechnology.

A record attendance was reached at the 40th Vegetable & Flower Seed Conference in Tucson, Ariz., in 2001. The meeting has had continuous growth in recent years, especially in international attendees. Program highlights included sessions on modern biotechnology and a legislative forecast on seed issues with the new Bush Administration. Exhibiting opportunities were also introduced.

Due to the growing prevalence of biotech crops and related trade issues around the world, ASTA held two workshops in Chicago on the adventitious presence of biotech material in traditional seed. Both workshops generated excellent discussion about the quality and marketing of traditional and biotech seed.

As usual, the ASTA Annual Convention brought together industry leaders, representing all types of seed and areas of business, to discuss issues of industry-wide importance. This year was the first time that ASTA held the convention in conjunction with the Mexican Seed Trade

Association (Asociacion Mexicana de Semilleros, A.C., abbreviated AMSAC).

Reflecting the meeting's theme, "The Winds of Change," ASTA's 118th and AMSAC's 30th Annual Convention in San Antonio, Texas, allowed the two associations to learn from each other and establish a more united industry with common goals and aspirations. Key issues this year were agricultural biotechnology, e-commerce, and brand marketing.

Three seed industry leaders were honored at the 2001 convention for their professional achievement. ASTA's Lifetime Achievement Award was presented to Ed Robinson, of J.C. Robinson Seed Co. Distinguished Service Awards were given to Bruce Maunder, Ph.D., research advisor, and Jeffrey Dahlberg, Ph.D., research director, National Grain Sorghum Producers Association, for their involvement in preserving the U.S. Department of Agriculture's St. Croix plant quarantine site.

The revised format of ASTA's Annual Convention, first introduced in 1999, continued in 2000 and 2001 with great success. The enjoyment of the less formal convention style has been substantiated by attendee survey results and increased attendance in the past three years.

# division and committee activities

Most ASTA divisions and committees met at least once during 2000-01.

These meetings were held in conjunction with the Corn & Sorghum and Soybean Conferences in December 2000, Vegetable & Flower Conference in January 2001, and Annual Convention in June 2001.

Key activities of some divisions and committees follow:

The CORN & SORGHUM DIVISION conducted a successful joint conference with the Soybean Division in Chicago; revenues generated from the conference were at an all time high. Division members participated in efforts to influence regulatory and legislative proposals relating to biotech traits in seed at the federal and state levels. They also participated in efforts to establish realistic tolerances for adventitious

presence of biotech traits in non-target seed. Members provided funding and support for the U.S. Grains Council to promote efforts to expand export markets for U.S.-produced corn and sorghum. The division also continued to provide funding for the Germplasm Enhancement for Maize project, a national effort to increase the corn germplasm base.

Three committees within the FARM SEED DIVISION (Alfalfa, Clover & Other Legumes; Conservation, Pasture & Forage; and Small Grains) merged into one, named the Forage and Small Grains Committee.

Invasive species remained a hot topic for the LAWN SEED DIVISION, which focused on the proposed federal process for implementing Executive Order 13112 and state applications of the order. The division also formed a Subcommittee on Uniform Labeling for both warm and cool season turfgrasses, which is advocating a 15-month germ testing nationwide. The division is also pursuing acceptance of more accurate fluorescence testing practices for ryegrass. It continued to monitor developments in the regulation and marketing of biotech seed.

The VEGETABLE AND FLOWER SEED DIVISION appointed Phil Ashcraft as the new ASTA representative to the International Seed Trade Federation's Vegetable Section. Division members voted to accept a recommendation by an ad hoc committee about uniform sizing and labeling of vegetable and flower seed. In March 2001, division leaders formed an executive committee. It will consist of the division's three officers, three immediate past chairs, and four committee chairs. This committee will meet twice a year to set and administer division goals and objectives.

Among many issues, the INTERNATIONAL COMMITTEE addressed the adventitious presence of biotech material in traditional seed, testing and labeling for such presence, and individual country regulations pertaining to biotech seed and food. In addition, the committee discussed adventitious biotech levels in corn, soybean and cotton that were traded in international commerce in 2000-01 and maintained its monitoring of phytosanitary issues. The Seed-Borne Disease Subcommittee of the International Committee merged into the Phytosanitary Subcommittee.

The MANAGEMENT SKILLS COMMITTEE, in conjunction with Purdue University, implemented the 14th ASTA Management Academy in March 2001 at Purdue in West Lafayette, Ind. About 60 individuals participated in the five-day program. The Academy focuses on the practical applications of finance, marketing, human resource management, and strategic planning that are critical to the long-term success of seed companies. The committee also discussed launching a new ASTA Executive Management Forum, a three-day program for upper management.

The PUBLIC RESEARCH ADVISORY COMMITTEE focused on understanding the role of public research in today's rapidly emerging, technology-driven business environment. A key project of the committee is to re-examine ASTA's policy on the release of public plant varieties and germplasm, which is 15 years old.

The SEED TREATMENT AND ENVIRONMENTAL COMMITTEE focused on treated seed disposal in North America, activities of the International Seed Trade Federation's Seed Treatment & Environmental Committee, and updates on seed coatings.

# ASRF

## American Seed Research Foundation

The American Seed Research Foundation (ASRF) was established in 1959 as a scientific, benevolent and educational corporation. It supports public research in plant and seed biology, applied research projects with broad or crop-specific applications, public-private cooperation in seed-related research, and educational opportunities in seed-related sciences.



In the 2000-01 fiscal year, the ASRF was restructured and redefined. This process began with the approval of a new mission statement:

*The mission of ASRF is to encourage research in plant and seed biology and to facilitate the transfer of resulting technology to benefit the seed industry, farmers and consumers on a global basis.*

Then, research proposal promotion was expanded to an international level, the proposal review process was revamped, new ASRF Scientific Advisory Council members were appointed, and foundation enthusiasm was renewed. The council now consists of 20 eminent seed scientists from both the public and private sectors.

ASRF research grants continue to be the major area of funding, as they have been for more than 40 years. This year, three projects funded from 1997-2000 were completed. Final reports on these projects will be published in the peer-reviewed journal *Seed Technology*.

The foundation also received 31 new project proposals in 2001, including two from outside of the United States for the first time.

This reflects the foundation's, as well as the seed industry's, growing orientation towards globalization.

These proposals are being reviewed by the ASRF Scientific Advisory Council; the top-rated ones will be reviewed by the ASRF Board of Directors, three of which will be selected for funding. ASRF raised grants this year from \$10,000 to \$15,000. Normally, each project is funded for three years.

The ASRF explored new collaborations in 2000 with the ASTA Basic Research Committees within the Corn & Sorghum and Soybean Divisions. Each of these committees funds seed research projects with donations from private and public organizations. ASRF offered to provide administrative services for these projects to give them continuity and consistency. This idea was based on the collaboration that ASRF has had with ASTA's Vegetable & Flower Seed Permanent Research Fund for the past 10 years.

ASRF further expanded its outreach this year with a new educational initiative, called "Operation Student Connection," which kicked off at ASTA's 2001 Annual Convention. The program provides travel grants for

graduate students majoring in seed biology or seed science and technology to attend ASTA's Annual Convention each summer. Student attendees are matched with seed company registrants, who serve as mentors during the meeting. In turn, students are required to give a brief progress report on his or her area of research to ASRF and ASTA members. The program gives student attendees a first-hand connection with the seed industry and the latter a glimpse of new areas of research.

ASRF continues to develop new programs to broaden its outreach and services to the seed industry. Since its inception, the ASRF has reviewed more than 600 project proposals and funded more than 40 projects. The foundation's investment in basic seed research totals about \$580,000 to date. These funds have stimulated more than \$1,700,000 in matching funds provided by cooperating organizations. ASRF is supported by dues from its membership of some 60 seed companies. For more information, go to <http://www.amseed.com/asrf/index.html>

# NCCPB

## National Council of Commercial Plant Breeders

The National Council of Commercial Plant Breeders (NCCPB) was founded in 1954 as a non-profit organization to promote the achievement and interests of U.S. plant breeders worldwide.

### The NCCPB

*promotes plant breeding, plant genetic research, and related plant improvement disciplines as career paths to help ensure an ongoing supply of trained plant scientists;*

*fosters cooperation and mutual assistance with public plant research agencies;*

*recognizes individual scientific achievements in plant and seed improvement;*

*promotes high standards of professional and business ethics concerned with plant breeding and genetic research; and*

*supports voluntary intellectual property protection for private developers or inventors of plant improvements on a world-wide basis.*

The NCCPB sponsors annual awards for outstanding plant breeders working in the private and public sectors and graduate students studying plant science. In December 2000, Dermot P. Coyne, Ph.D., of the University of Nebraska received the public sector award for his work on dry bean breeding and improvement, and John A. Schillinger, Ph.D., of Schillinger Seeds received the industry award for his achievements in soybean breeding. Graduate students Joseph Kuhl of the University of Wisconsin and Stephanie Slough of Colorado State University were honored. Previous winners are listed on the NCCPB web site at <http://www.amseed.com/nccpb>



# sources of revenue

ASTA's primary source of revenue comes from membership dues. During the past fiscal year, other sources of revenue (in descending order) were conferences, exhibits, publications, interest and dividends, and administrative fees.

ASTA also maintained a number of joint ventures with the U.S. Department of Agriculture, World Bank, U.S. Agency for International Development, and Inter-American Development Bank. It continued to oversee accounts and budgets for the American Seed Research Foundation and National Council of Commercial Plant Breeders.



# ASTA'S new headquarters

In June 2001, ASTA moved its headquarters to the "Old Town" of Alexandria, Virginia, located about 15 miles outside of the District of Columbia. The move was prompted by the need to obtain more office space for less money, which was not feasible in ASTA's former downtown location.

The new office gives the association ample space, while still being close to Capitol Hill and other places in the District of Columbia that are key to ASTA activities. It also has convenient access to both trains and planes, located across the street from the King Street metro station and five minutes away from Ronald Reagan National Airport by car or train.

ASTA's new office features more than 18 offices and work stations combined, allowing room for staff growth in the next decade. It has two conference rooms, one large enough to seat up to 25 people and the other up to eight. The large conference room is connected to an outdoor balcony. In keeping with ASTA's "first-the seed" motto,

the interior is decorated with harvest colors (gold, brown, green, and burnt orange) and seed art adorns the walls. Moreover, new computer and phone systems were installed.

Alexandria is considered the "second city" of the District of Columbia. It is nestled along the Potomac River and home to several historical sites of public interest, such as George Washington's Mount Vernon Estate & Gardens, Gadsby's Tavern Museum, Carlyle House Historic Park, and George Washington Masonic National Memorial. It also features upscale restaurants, hotels, and shopping.

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