



# SEED INFO

Official Newsletter of the WANA Seed Network



ICARDA

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## EDITORIAL NOTE

**S**eed *Info* aims to stimulate information exchange and communication among seed staff in the Central and West Asia and North Africa (CWANA) region. The purpose is to help strengthen national seed programs, which supply quality seed to farmers.



The WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) has triggered an important debate on the legal protection of innovations in many countries. Apart from WTO, many bilateral free trade agreements between the US or EU and developing countries contain clauses to harmonize IPRs at levels higher than the minimum requirements of TRIPS. This reduces opportunities for developing countries to target their national IPR systems to specific national requirements. Giving the trade objectives priority in the design of national IPR systems leads almost automatically to increased harmonization. Since IPRs are primarily designed to stimulate innovation and development, not to promote trade, countries should have a freedom to give priority to the Development Related Aspects of Intellectual Property Rights (DRIPS). When DRIPS is given due importance, harmonization will not be a goal in itself, but a specific outcome of explicit national policy.

In the **NEWS AND VIEWS** section, your regular contributor Niles Louwaars once again addresses the issue of intellectual property from the perspective of TRIPS or DRIPS. There is also news from the International Seed Federation (ISF) highlighting its annual congress in Christchurch, New Zealand; African Seed Trade Association (AFSTA) on its 7th Annual Seed Congress in Livingstone, Zambia; and Union for the Protection of New Plant Varieties (UPOV) on accession of Morocco to its convention.

The section on **SEED PROGRAMS** includes news from Afghanistan, Ethiopia, Libya, Oman, Syria and Uzbekistan. The

news from Afghanistan focuses on village-based seed enterprises in eastern Afghanistan and the newly established National Seed Committee. The news from Ethiopia covers the on going Tailor Made Training Program by the Ethiopian Seed Enterprise, Wageningen International and ICARDA to strengthen human resources at federal and regional levels to support farmer-based seed production. From Libya, we report on the role of the National Center for Improved Seed Production (NCISP) in seed production and supply. There is also news on various training courses in capacity development of human resources in the seed sector from Oman, Syria, Turkey and Uzbekistan.

In the **HOW TO** section, Abdoul Aziz Niane discusses the practical application of simplifying purity testing for seed quality assurance. We invite our readers to contribute to this section and share their practical experience.

The **RESEARCH** section aims to capture information on adapted research or issues relevant to seed program development in the region and beyond. Asrat Asfaw from the Southern Agricultural Research Institute writes about bean seed flow and exchange networks in southern Ethiopia.

*Seed Info* encourages the exchange of information on the national, regional, and global seed industry. We encourage our readers to share their views with colleagues through this newsletter. Your contributions are most welcome in Arabic, English, or French.

Have a nice read.

**Zewdie Bishaw**  
Editor

## WANA SEED NETWORK NEWS

**T**his section presents information on the WANA Seed Network, including network activities and reports of the meetings of the Steering Committee and the WANA Seed Council.

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## **Egypt Organizes Second International Seed Trade Conference**

Under the auspices of the National Seed Council, the Egyptian private seed sector will host the Second International Seed Trade Conference (ISTC2007) from 19-21 November 2007 in Giza, Cairo, Egypt. The conference aims at promoting seed trade within and between Central Asia, West Asia and North Africa and beyond. A major event at the conference will be seed trade and exhibitions by seed companies, seed equipment manufacturers, agricultural input suppliers, and agricultural machinery manufacturers. Companies who wish to participate in the conference or exhibit their products should contact the Conference Secretariat. For more information and registration, please contact the Conference Secretariat: Dr (Miss) Sarah Yehia, General Manager, Egyptian Seed Association (ESAS), 35, Gamet El Dowal El Arabia Street, Mohandessen, Cairo, Egypt; Telfax: +20-2-7484018/74991783387274; E-mail: [info@esas-egypt.org](mailto:info@esas-egypt.org); Website: <http://www.esas-egypt.org>

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## **Regional Workshop on Participatory Plant Breeding and Seed Supply**

Conventional plant breeding programs have registered spectacular progress in developing new crop varieties for uniform and favorable areas where the formal sector managed to produce and market seeds to farmers. However, as the environment becomes complex, risky and dry it is a greater challenge to breed new varieties that meet farmers' preferences and are adapted to diverse environmental conditions. The limited success of conventional plant breeding in less favorable areas of the developing world led to the emergence of different forms of

participatory technology generation with farmers.

In the last decade, participatory plant breeding has emerged as an alternative strategy for breeding farmer preferred crop varieties with better potential for large-scale adoption and diffusion. It has direct relevance to small-scale resource poor farmers particularly those in less favorable environments. Consequently, there is also a challenge to find innovative approaches not only to breeding crop varieties, but also to organize a low-cost production and marketing system to ensure seed delivery of new varieties. From the outset, PPB efforts need to be linked with decentralized seed production and supply, if its benefits to be exploited effectively through more systematic intervention using existing formal channels, or new initiatives closer to the informal seed sector.

Cognizant of the challenge, ICARDA initiated PPB in Algeria, Eritrea, Iran, Jordan, Morocco, Syria, Tunisia and Yemen on barley, lentil, etc which are important food and feed security crops in the region. Similarly, ICARDA is promoting Village-based Seed Enterprises (VBSEs) with the major thrust to decentralize seed production and marketing to ensure the availability and accessibility of new varieties and seeds to farming communities. A Regional Workshop on PPB and Seed Supply was held from 12-15 March 2007 at ICARDA headquarters in Aleppo, Syria. The main objective of the workshop was to review technical, institutional and regulatory frameworks in PPB and seed supply and assess the progress achieved and constraints that hinder further development.

The workshop include key presentations, case studies, country reports and group discussions leading to recommendations and action plans for implementation by national governments. Each participant prepared a background paper and presentation on PPB and farmer-based seed production: achievements,

constraints, and recommendations. PPB approaches on barley, lentil, sorghum and beans and farmer-based seed production (including village-based seed enterprises) from selected countries of the region were presented: Afghanistan, Algeria, Egypt, Eritrea, Ethiopia, Iran, Jordan, Morocco, Syria, Tunisia, and Yemen. The presentations gave insights into key policy, regulatory, institutional, technical and organizational issues on PPB and farmer-based seed supply in the respective countries.

A total of 21 participants from 11 countries attended the workshop representing different sectors of the seed industry including the ministries of agriculture, national agricultural research systems, universities, national seed programs and an NGO. The participants were policy makers, senior managers and professionals from Afghanistan (5), Algeria, Egypt, Eritrea, Ethiopia (2), Iran, Jordan, Morocco, Syria (5), Tunisia and Yemen (2), countries where experiences in PPB and farmer-based seed production have been implemented.

*Stefania Grando, ICARDA, P.O. Box 5466, Aleppo, Syria. E-mail s.grando@cgiar.org*

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### **Regional Workshop on Harmonization of Seed Regulations in ECO Member Countries**

Under a regional TCP project for 'Strengthening Seed Supply in the ECO Region', ICARDA, the Economic Cooperation Organization (ECO), and FAO organized the Second Regional Workshop on Harmonization of Seed Regulations from 30 May to 1 June 2007 in Baku, Azerbaijan. The workshop focused on quality assurance and seed certification in ECO member countries, and opportunities for harmonization.

H. E. Ismat Abasov, Minister of Agriculture, officially opened the workshop in the presence of H.E. Eldar Ibrahimov, Chairman of the Permanent Commission for Agrarian Policy of the National Assembly, Mr Rufat Asadov, Chief of the Agro-

industrial Department, and ambassadors of ECO member countries in Azerbaijan (Kazakhstan, Turkey, Uzbekistan). In the opening statement, HE Abasov reiterated the need for member countries to strengthen regional integration in all spheres of agriculture.



*Participants of the Second Regional Workshop on Harmonization of Seed Regulation with H.E. Ismat Abasov (Front row: six from left)*

Dr Bahram Aliyev, Deputy Minister of Agriculture, Azerbaijan, chaired the workshop. The workshop brought together senior delegates from ECO member countries, ECO, FAO and ICARDA. It was attended by directors, deputy directors or senior staff of seed quality assurance and certification agencies from Azerbaijan, Iran, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkmenistan, Turkey and Uzbekistan. The workshop analyzed current status, deliberated on effective ways of harmonizing seed regulations, and developed a framework for harmonization of seed certification in the region to ensure that farmers have better access to varieties and seeds.

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### **NEWS AND VIEWS**

**N**ews, views, comments, and suggestions on varieties and seeds are included in this section. It is a forum

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for discussion among professionals in the seed sector.

### **Intellectual Property: TRIPS or DRIPS?**

The WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) has triggered an important debate on the legal protection of innovations in many countries. The seed sector benefits from a specific clause in the TRIPS agreement which allows countries to exempt plant varieties from patent protection. Patents commonly lead to the accumulation of different rights in one variety, which makes plant breeding a very complicated activity.

Plant Breeder's Rights are much more appropriate with a clear definition of the subject matter (the variety) and scope of protection. However, the latest UPOV Act (of 1991) is difficult to implement in many developing countries, particularly those that value the concept of Farmers' Rights (laid down in FAO's International Treaty). The UPOV clause restricting any transfer of seed of protected variety among farmers (whether commercial or through barter or gifts) without the authorization of the breeder looks good from the point of view of commercial seed production. However, when this clause cannot be implemented at the local level, it may undermine the credibility of the whole protection system. The World Bank suggested designing the breeder's rights according to the goals; and distinguishing between commercial, potentially commercial and non-commercial crops based on opportunities for the development of market-oriented seed industry.

Apart from the WTO agreement, many bilateral free trade agreements between the US or EU and developing countries contain clauses to harmonize IPRs at levels higher than the minimum requirements of TRIPS. This reduces opportunities for developing countries to target their national IPR systems to specific national requirements. Giving trade objectives priority in the design

of national IPR systems leads almost automatically to increased harmonization. Since IPRs are primarily designed to stimulate innovation and development, not to promote trade; countries should have freedom to give priority to the Development Related Aspects of Intellectual Property Rights (DRIPS). When DRIPS is given due importance in designing IPRs, harmonization will not be a goal in itself, but a specific outcome of explicit national policy.

After many years of debate, the World Intellectual Property Organization (WIPO) has recently started seriously working on its development agenda. It may create more space in the international debate on IPRs on development related aspects. This will benefit the poor, but it could also create more room for developing IPR systems in the breeding and seed sector that can be fully implemented in developing countries. This will eventually enable quick development of a credible system that supports the industry without creating unnecessary political noise.

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### **Morocco Accedes to UPOV Convention**

Morocco became the sixty-second member of the International Union for the Protection of New Varieties of Plants (UPOV) on 8 September 2006. The purpose of the UPOV Convention is to encourage the development of new varieties of plants by granting breeders an intellectual property right based on a set of clearly defined principles. To be eligible for protection, varieties need to satisfy certain conditions, such as being distinct from existing, commonly known varieties and sufficiently uniform and stable. New varieties of plants are one of the most powerful tools to enhance food production in a sustainable way, to increase income in the agricultural sector and to contribute to overall development.

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UPOV members are: Albania, Argentina, Australia, Austria, Azerbaijan, Belarus, Belgium, Bolivia, Brazil, Bulgaria, Canada, Chile, China, Colombia, Croatia, Czech Republic, Denmark, Ecuador, Estonia, European Community, Finland, France, Germany, Hungary, Iceland, Ireland, Israel, Italy, Japan, Jordan, Kenya, Kyrgyzstan, Latvia, Lithuania, Mexico, Morocco, Netherlands, New Zealand, Nicaragua, Norway, Panama, Paraguay, Poland, Portugal, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Trinidad and Tobago, Tunisia, Ukraine, United Kingdom, USA, Uruguay and Uzbekistan.

UPOV is an intergovernmental organization based in Geneva. For further information please contact: UPOV Secretariat, Tel: +41-22- 338 9155; Fax: +41-22-733 0336; E-mail: [upov.mail@upov.int](mailto:upov.mail@upov.int); website: [www.upov.int](http://www.upov.int)

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### ISF Annual Congress held in New Zealand

The International Seed Federation (ISF) 2007 Annual Congress took place on 21-23 May 2007 in Christchurch, New Zealand and was attended by 871 participants from 54 countries.

All the ISF Sections and Committees met during the Congress, discussed and prepared several position papers for adoption by the General Assembly. The following position papers were unanimously adopted: (i) Definition of hybrids; (ii) Implementation of Articles 14(2) and 14(3) of UPOV 1991 in relation to the phrase 'reasonable opportunity'; and (iii) Plant Genetic Resources for Food and Agriculture.

The Sections also adopted guidelines for the handling of a dispute on essential derivation on maize, oilseed rape and cotton. These guidelines complement those already adopted on ryegrass (2002) and lettuce (2004). These guidelines, combined with the ISF Regulation for the Arbitration of Disputes Concerning Essential Derivation, now give effective tools to breeders to defend their rights. All these documents are available on the ISF website [www.worldseed.org](http://www.worldseed.org).

The participants were also presented with guidelines on protection of hybrids, on the FAO Material Transfer Agreement adopted in 2006 and on the enforcement of PBR in case of illegal use of seed of protected varieties.

The Congress was followed by a one day workshop on enforcement of PBR with presentations by speakers from Europe, North and South America, Africa and Australia. Enforcement of Plant breeders' rights is difficult and the exchange of ideas among the workshop participants will certainly facilitate the development of anti-infringement strategies at national and regional levels. The main lessons can be summarized as follows:

- Communication with the putative infringers explaining the role and the scope of plant breeders' rights

- Action in case of infringement of plant breeders' rights
- Communication on the jurisprudence after action

A motion on Uniform Rate of Registration for crop protection products for seed treatment on a crop-by-crop basis was also adopted by the General Assembly in order to facilitate the transboundary movement of seed.



*Mr Selwyn Manning awarded Honorary Life Membership during ISF Congress in New Zealand*

In addition to the technical discussions, the Congress was the scene of deal making among delegates in the trading floor. Participation in the Congress allowed the delegates to be better acquainted with the New Zealand seed industry. The ISF 2007 Congress once again proved fruitful in terms of technical discussions, trade and friendship. Bernard, LeBuanec, ISF, Chemin du Reposoir 5-7, 11260 Nyon, Switzerland; E-mail: [b.lebuanec@worldseed.org](mailto:b.lebuanec@worldseed.org)

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#### **7th AFSTA Annual Congress held in Zambia**

The Seventh Annual Congress of the African Seed Trade Association (AFSTA) was held 6-9 March 2007 in Livingstone, Zambia. The Congress was officially opened by H.E. Levy Patrick Mwanawasa, President of Zambia accompanied by the Minister for Trade, the Minister of Agriculture and Cooperatives, and other senior government officials.

About 180 participants from 33 countries attended the Congress including representatives from regional and international organizations: ISF, ISTA, UPOV, FAO, APSA, African Organization for Intellectual Property (OAPI), Eastern Africa Seed Committee (EASCOM), Common Market for Eastern and Southern Africa (COMESA), Southern Africa Development Community (SADC), and African Union (AU).

The Congress started with presentation on 'Towards a harmonized seed trade in Africa: coordination efforts between the regional economic communities' where representatives of Eastern Africa, Southern Africa and Western Africa presented their achievements and future programs to bring the harmonization process to conclusion. The other presentations included: (i) Development of private seed companies in Africa; (ii) Highlights of the MTA of the International Treaty on Plant Genetic Resources for Food and Agriculture; (iii) The importance of horticultural seed trade in Africa: particularities and appropriate rules for development; and (iv) Status of biosafety protocol for the commercialization of genetically modified seeds in Africa. All the papers of AFSTA Congress 2007 are available on request from the AFSTA Secretariat ([afsta@afsta.org](mailto:afsta@afsta.org)).

AFSTA continues to organize technical training related to seeds to build capacity of its members and dissemination of information on the progress in harmonization. AFSTA is a non-profit, non-political association representing the African seed industry, with 67 members in 34 countries.

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#### **Brazil Hosted 28th ISTA Congress**

The 28th Congress of the International Seed Testing Association (ISTA) was held from 6-12 May in Iguassu Falls, Brazil. It was

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organized by the Brazilian Seed Association (ABRATES) and was combined with their annual meeting. As a result, there was a record attendance of well over 1,000 participants, approximately 600 from Brazil and 500 from other countries. The location was a special attraction for the foreign participants, the Iguassu Falls being one of the most spectacular waterfalls in the world.

The Congress followed the established format with a three day Seed Symposium of scientific presentations followed by the Business Meeting of ISTA on 10 and 11 May at which the new President takes office and a new executive committee is elected. In addition there were open meetings of all the ISTA Technical Committees over the weekend of 5-6 May. This provided insights into their work, which is central to the technical function of ISTA. Three professional workshops were also held before the Congress on vigor, statistics, etc. Collectively, all these activities make the ISTA Congress by far the largest international gathering of seed technologists. Unfortunately, the CWANA region was not strongly represented; only Egypt and Turkey had voting delegates while Iran and Libya had active participants.

The theme of the Seed Symposium was 'diversity' and this was reflected in different ways in six sessions of oral presentations and posters, each introduced with a keynote address. The standard of presentations was very high which made it difficult to decide on the awards for the best presentations and posters.

The general meeting of ISTA is the occasion for discussion of technical matters, especially the approval of any changes to the 'Rules' for seed testing, as well as other administrative business of the Association. All technical committees presented their reports of work over the past three years, and plans for the next three years. One significant milestone was the accreditation in 2006 of the national seed laboratory in Hanoi, Vietnam as

the 100th ISTA accredited laboratory since this new scheme was introduced in 1997. A special presentation was made by the outgoing President Mr Pieter Oosterveld to the official representative of Vietnam.

Another piece of good news was the increase in sales of the 'Orange International Certificate' during the past year which provides a significant part of the revenue for the association. While the Orange certificate is by far the most widely used, Green and Blue certificates also exist for special situations, and there are changes in prospect which could remove the Green certificate.

The presentations given during the Seed Symposium and the Minutes of the ISTA General Meeting can be found on the ISTA website at [www.seedtest.org](http://www.seedtest.org). It is difficult to single out specific items of business for special comment, but for all those who use the ISTA rules, the progressive assimilation of the Annexes into the main rules, is perhaps the most relevant issue. This is a large and very demanding task for those involved, but when complete, it should make the Seed Testing Rules more consistent and a 'user-friendly'.

On the last day of the meeting the new executive committee was elected and the official handover of the presidency of ISTA was made to Dr Katalyn Ertsey, the representative of Hungary. Dr John Hampton was elected First Vice-President for the next three years and will take over the presidency from the next Congress to be held in Cologne, Germany in 2010. The Annual Meetings of ISTA will be held in Bologna, Italy in June 2008 and Zurich in 2009.

Foreign participants at the Congress were impressed by the high level of interest in seeds in Brazil – as reflected in the number of participants from all parts of the seed industry, and the wide range of papers and posters. Agriculture is a key part of the national economy and this has promoted the development of a dynamic seed industry over the past 40 years or so with strong research, academic and regulatory institutions, all



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contributing to a dynamic commercial seed industry. The host country provided excellent hospitality, all which contributed to the strengthening of the 'family atmosphere' for which the association is well-known.

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## **CONTRIBUTIONS FROM SEED PROGRAMS AND PROJECTS**

**I**n this section we invite national seed programs, projects, universities, and regional and international organizations to provide news about their seed-related activities.

### **Alternative Livelihoods Program-Eastern Afghanistan**

ICARDA is implementing an Alternative Livelihoods Program-Eastern Region (ALP/E) project through Development Alternative Inc (DAI) funded by USAID. The project focuses on three provinces (Kunar, Laghman and Nanagarhar = KLN). Establishment of Village-based Seed Enterprises is a key project component. At present 17 VBSEs at different stages of development are engaged in seed production and marketing under the ALP/E project and are supported by ICARDA and partner organizations. The VBSE members are undertaking all seed production and marketing operations at the local level.

#### *Training in Seed Production Technology*

About 90 participants including VBSE members, MAIL extension agents and ICARDA staff from 17 districts of KLN provinces attended a course in Seed Production Technology from 24-25 April 2007 in Jalalabad, Nangarhar. The course was practical-oriented and focused on simple and illustrative procedures for quality seed production. It was structured along four main themes: introductory lectures on variety identification, seed production, field inspection, seed quality tests.

All lectures were complemented by practical sessions and discussions in the field and laboratory. VBSE members visited seed production fields where variety identification, rouging and field inspection procedures were demonstrated and practicals exercised. During a visit to seed testing laboratory procedures for sampling and quality testing for physical purity and germination were demonstrated. The purpose is to create awareness of the linkages between seed production and quality assurance and its practical implementation. Farmers were clearly aware of 'quality' issues in seed production and expressed their commitment in meeting the challenges.



*Participants of the seed production technology course during a practical session*

#### *Seed Production by VBSE Members*

Farmer-based seed production and marketing enterprises are progressing very well in all three target provinces. VBSE seed production fields have good stand and are very clean since farmers use improved agronomic practices compared to fields of non-VBSE farmers. Most non-VBSE crop production fields have high levels of weed infestation, low plant population and quite often varietal/crop mixtures. Therefore, VBSE seed production fields can serve multiple functions. Apart from introducing new varieties for assisting adoption and diffusions, the fields can also be used for demonstration of improved agronomic practices and for promotion of seed produced by VBSEs to create demand from neighboring farmers.



*Wheat seed production by member of Besboud VBSE in Nangarhar province*

*Shamsuddin Siddiqi, ICARDA-Kabul, P.O. Box-1355, Kabul, Afghanistan, E-mail s.siddiqi@cgiar.org;*

### **Afghanistan Seed Board Gets Secretariat**

The Minister of Agriculture, Irrigation and Livestock (MAIL), H.E. Obaidullah Ramin, laid the foundation stone of a National Seeds Secretariat building on Sunday 27 May 2007 at Badam Bagh. Kabul. Also present at the ceremony were H.E. Mohammad Sharif, MAIL Deputy Minister; Dr. Tekeste Tekie, FAOR in Afghanistan; Mr. Matin Behzad, EC Rural Development & Food Security Advisor; Mr Mirdad Panjsheri, Chairman of the National Seeds Committee; advisors and senior staff of the MAIL; and staff of the EC-funded seed project.



*H.E. Obaidullah Ramin cutting the ribbon during the ceremony for laying the Foundation Stone for the National Seed Secretariat*

This office will accommodate the apex institutions for coordinating the seed industry in Afghanistan, comprising the National Seed Board and its affiliated agencies, namely; the Variety Release Committee, the Seed and Plant Health Inspectorate, and the Seed Certification Agency.

The National Seed Board will be proclaimed upon ratification of the Seed Law that is currently under consideration by the government. Effective coordination and regulation of the seed industry by the government and ensuring farmers have access to quality seed and planting materials are crucial for the development of agriculture in the country. The National Seed Board is a permanent institution with responsibility for implementing the National Seed Policy and the Seed Law and advising the government on all matters relating to seed sector planning and development. Amongst the key functions of the National Seed Board will be the development of phytosanitary and plant health systems to ensure the country is able to monitor and control the movement of seeds and planting materials. The Board will function as the apex body in the seed sector with overall oversight for the management of the national seed program and having autonomy to carry out its functions.

The National Seeds Secretariat will cost US\$ 310,000; financed from a 10-year seeds sales revolving fund generated by seed producing partners such as Voluntary Association for the Rehabilitation of Afghanistan, Islamic Relief Agency, Mercy Corps, Improved Seed Enterprise and Nangarhar Valley Development Authority. The use of part of the revolving fund will serve long-term institutional development and will help strengthen the national seed industry in Afghanistan.

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## National and Regional Seed Workshops in Ethiopia

In Seed Info No 32, we reported that the Ethiopian Seed Enterprise (ESE), Wageningen International (WI) and ICARDA had launched a one year 'Tailor Made Training Program (TMTP) on Improvement of farmer-based seed production scheme and revitalizing informal seed supply in Ethiopia'. The TMTP is supported with funding from Netherlands Organization for International Cooperation in Higher Education (NUFFIC) to strengthen the capacity of federal and regional (Amhara, Oromia, Southern Tigray) institutions. The participating institutions include federal and regional agricultural research institutes, Bureaus of Agriculture and Rural Development, and NGOs implementing farmer-based seed production.

The first training courses were two one-week modules conducted from 16-28 October 2006 in Hawassa University, Awassa. The first component introduced participatory approaches, participatory plant breeding, genetic diversity and informal seed supply. The second component focused on technical aspects and institutional support for farmer-based seed production and small-scale seed enterprise development. Twenty-seven participants, four each from Amhara and Tigray, five from South, eight from Oromia and six from federal institutions, representing various organizations participated in the first two components.

### *National Seed Workshop*

The participants of the first two components were grouped into five teams representing different stakeholders and went back to their respective regions. Each team conducted participatory seed system analysis and assessed the opportunity for the establishment of village-based seed enterprises. During the national seed workshop held from 12-15 February 2007 in Addis Ababa, each team presented its findings and proposals for establishing VBSEs for further refinement and

presentation during the regional seed workshops to a broad range of stakeholders, who assured their commitment in implementing the findings.



*Participants of the national seed workshop in Addis Ababa, Ethiopia*

### *Regional Seed Workshops*

Following the national seed workshop, four regional seed workshops were organized in Awasa (Southern Region), Nazareth (Oromia Region), Mekelle (Tigray) and Bahir Dar (Amhara). About 93 participants attended the four regional seed workshops, representing a broad range of stakeholders to deliberate on the findings of the participatory seed system analysis and the potential for establishing VBSEs. Moreover, each stakeholder group presented its visions for seed delivery, identified its role and responsibilities, prioritized the activities and pledged its commitment in implementing the priority areas identified collectively by the workshop participants.



*Participants during group work at the regional seed workshop at Awasa, Ethiopia*

Resource persons from WI, ICARDA, ASARECA, ESE and SARI facilitated the national and regional workshops.

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### **EIAR Releases and Multiplies Seed of Stem Rust Resistant Wheat Varieties**

Cereal rusts are among the most devastating plant diseases worldwide. The three wheat rusts (stem, yellow, and leaf rusts) are able to multiply within susceptible crops and associated grass weeds, and are capable of both local and long distance dispersal in continental wind movements. Historical records show that virulent stem rust races occurring in Africa were able to reach Australia, presumably on high altitude winds and caused great yield losses in Near Eastern countries and as far as Pakistan and Nepal.

The emergence of wheat stem rust race Ug99 in East Africa represents a potentially devastating threat to wheat production in East Africa, Middle East and South Asia; and it is anticipated that Ug99 will spread to East and Central Asia and the Americas. Unlike yellow rust, stem rust fungus develops well under warmer climatic conditions; hence it is expected that wheat growing areas in the Arabian Peninsula could be affected severely. Yield losses due to Ug99 of up to 71% have

been recorded under experimental conditions in Kenya and up to 40% in Ethiopia.

Growing genetically resistant cultivars is the most economical strategy to protect the world's food supply from losses to the three rust diseases of wheat. Since the leading cultivars currently grown in Africa, the Middle East and South Asia and a major portion of the current advanced breeding germplasm of CIMMYT and ICARDA are susceptible to stem rust race Ug99, an aggressive breeding strategy needs to be in place to rectify the situation. Resistances to yellow rust and leaf rust must also be incorporated in replacement varieties

There is strong interface between variety development and seed supply. However, there are inherent weaknesses in the seed systems in nearly all countries of the region, hindering farmers' access to improved varieties and seeds. To date the formal seed sector meets less than 10% of the national wheat seed requirements across the region. The average age of varieties is over 10 years in the majority of vulnerable countries. The majority of farmers plant their own farm-saved seed, increasing the vulnerability of existing wheat varieties to impending rust epidemics. Moreover, a long time lag occurs in the course of variety identification, variety release and seed production and supply in many countries delaying fast adoption and diffusion of new varieties.

The availability, access and use of quality seed is expected to accelerate the delivery, dissemination, and adoption of new rust-resistant varieties by farming communities. ICARDA is working with the NARS of Ethiopia to accelerate seed production through both formal and informal channels for fast change over and replacement of existing varieties to counter the threat of rust epidemics through pre-release and off-season seed multiplication of promising varieties. Two promising wheat lines (ETBW 4919 and ETBW4921 identified from CIMMYT materials), have been extensively tested across

locations in partnership with the Ethiopian Institute of Agricultural Research (EIAR) and found to be stem rust resistant in Ethiopia. In order to ensure availability of seed upon the release of these promising lines ICARDA supported off-season seed multiplication. ETBW 4919 and ETBW4921 were planted under irrigation on 6 and 12 ha, respectively at Melkasa Agricultural Research Center in 2007.



*Stem rust resistant wheat variety (ETBW4921) under off-season multiplication at MARC, Ethiopia*

Under Ethiopian conditions, the two bread wheat lines are of comparable performance. ETBW 4919 matures earlier, is of short stature and low yielding compared to ETBW4921 which is relatively late maturing (by 15 days), taller and a better yielder. The National Variety Release Committee released ETBW4921 in April 2007 and about 20 tones of seed were distributed to various stakeholders for further multiplication including the ESE, Bale State Farm Enterprise, development agencies, NGOs, and farmer groups.

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### **Role of NCISP in Seed Production in Libya**

In Libya, the Great Agriculture Production Projects used to handle seed production under

irrigation in the eastern, southern and western desert zones. At present, seed production is the responsibility of the National Center for Improved Seed Production (NCISP) which was established in 1998. NCISP has three farms for seed production, namely:

- Tsawa seed production center has 750 ha with pivot irrigation. It is located in the southwestern part of the country and specialized in seed production of cereal, legume and some vegetable crops.
- Kaam Bal Khams station has 6 ha and 0.5 ha fully equipped green house for seed production. It is located 150 km east of Tripoli and specialized in vegetable crop improvement
- Sidi Al-Masri station has 2 ha and located near Tripoli. It is used for evaluation of vegetable crops

From 2000 to 2005, NCISP has steadily progressed towards accomplishing its mandate of making available quality seed of wheat and barley. It is now producing seed of food legumes such as faba bean, pea, chickpea and vegetables (cucumber, onion, carrot). The success is the result of right policy and regulatory environment for production and distribution as well as adequate planning, and training in crop improvement, particularly of vegetable crops. The program resulted in the release of two cucumber varieties; Mukhtar and Kaam. In cereals, the program succeeded in producing foundation, registered and certified seed of newly released varieties. Since 2005/06, the center has started variety purification of bread and durum wheat varieties in cooperation with the FAO national seed project.

In order to meet the increasing demand NCISP has started contracting farmers for seed production of durum wheat, bread wheat, faba bean and oat since the 2005/06 crop season. The number of contract seed growers increased from 10 in 2005/06 to 30 in 2006/07. The area under contract with farmers is 970 ha for barley, 350 ha for durum

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and 493 ha for oat. All contractual seed production activities are concentrated in the southern agriculture zone..

The center provides farmers with foundation seed at a low price to produce certified seed which the center buys back at a premium price. Because of clear economic benefits more farmers are joining the program and investing in pivot irrigation facilities in the southern zone where water is available. The area covered by contract seed production is expected to exceed 5000ha by the next season. The high adoption rates of new technology by contract growers and its positive impacts on crop productivity and quality are clearly demonstrated by higher rates of contracted fields accepted by the field inspectors of the center. Following several decrees that restrict seed import to Libya, contract seed production appears the only way to cope with increasing seed demand of different crops.

*Ali Shreidi, National Cereals Coordinator, NCISP, Tripoli, Libya; E-mail: alishreidi@yahoo.com*

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#### **ICARDA and DGALR Organize Seed Technology and Biodiversity Course**

The ICARDA-APRP (Arabian Peninsula Regional Program) and the Directorate General of Agriculture and Livestock Research (DGALR) of the Ministry of Agriculture and Fishery (MAF) organized a training course on Seed Technology and Biodiversity from 23-25 April 2007 in Muscat, Oman. Dr Ahmed Al Bakri, Director General of Agriculture and Livestock Research, officially opened the course. Eighteen participants from various departments and regions of the Ministry of Agriculture and Fisheries (agricultural research, crop production, extension services, and seed production) attended the course including five Yemeni scientists.

The national seed industry in Oman is at early stage of development and faces constraints such as (i) lack of national seed policy and regulatory framework, (ii) lack of

trained manpower in seed technology, and (iii) low private sector participation in agriculture. In-service and post-graduate training for capacity development and assistance in the development of appropriate investment policies to promote private sector participation are areas for future collaboration with ICARDA.

*Ali Hussein Al Lawati, Plant Production Research Center, DGALR, MAF, P. O. Box 50 Seeb, PC 121, Oman; E-mail: aallawati@msn.com*

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#### **ICARDA and GOSM Organize Workshop on Seed Storage**

The General Organization for Seed Multiplication (GOSM) and ICARDA organized a refresher workshop in seed storage from 18-20 March 2007 at GOSM headquarter in Aleppo, Syria for staff working in its various branches throughout Syria. The course was officially opened by Dr Abdul Mohsen Said Omar, Director General, GOSM and Dr Ahmed El-Ahmed, ADG-GL of ICARDA.

About 25 participants attended the course from GOSM branch offices in Aleppo, Damascus, Daraa, Deir Ezzor, Idlib, Hama, Hassakeh, Homs, Latakia, Qamishli and Raqqa. The workshop included presentations on seed storage and management, pest management, etc. Field trips were organized to visit the facilities of General Organization for Cereals Trade and Store and GOSM in Aleppo province. At the end of the workshop the participants made recommendations for improving seed storage practices in GOSM. These were presented to Dr. Ahmed Bahij Sawas, Deputy Director of GOSM for implementation.

*Moustapha Dawalibi, GOSM, P.O. Box 5857, Aleppo, Syria; E-mail: dawalibi@scs-net.org*

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#### **Regional Training Course in Seed Marketing and Promotion for ECO Member Countries**

ICARDA, ECO and FAO in collaboration with Field Crops Research Institute in Turkey organized a regional training course on seed marketing and promotion under the project 'Strengthening Seed Supply in the ECO Region'. The course was held from 25-29 June 2007 in Istanbul, Turkey. Dr Vehbi Eser, Head of Field Crops Research Institute and representative of Ministry of Agriculture and Rural Affairs in Turkey officially opened the course.

The objective of the course was to train seed entrepreneurs from public and private sectors in modern seed marketing and promotion activities for future in-country training in the ECO region. On completion of the training course, the trainees are expected to train others through training courses/seminars on seed marketing and promotion in their countries. The presentations included: (i) Status of seed marketing in each participating country; (ii) Seed marketing and promotion; (iii) Enterprise formation, business planning, financial analysis and management; and (iv) Country and private sector experiences in seed marketing.

At the end, the panel of resource persons presented their views on the workshop and issues that emerged from discussions. Specifically underlined were the issues of partnership development between governments and the private sector, the need to form and strengthen a regional seed association in the ECO countries, identification of appropriate channels for dialogue with policy makers, and assistance required by some countries to define and implement seed sector strategies. It was concluded that some of these issues could form the agenda for further discussion in the upcoming international seed trade conference which will include technical staff, private sector, and policy makers.



*Participants of the ECO Regional Training Course on Seed Marketing and Promotion in Istanbul, Turkey*

Thirty one participants from eight ECO member countries representing both the public and private sector attended the course. The participants came from Afghanistan, Azerbaijan, Iran, Kazakhstan, Kyrgyzstan, Pakistan, Tajikistan, Turkey and Uzbekistan. *Koffi Amegbeto, ICARDA, P.O. Box 5466, Aleppo, Syria; E-mail: k.amegbeto@cgiar.org*

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#### **ICARDA-CAC Organized Seed Quality Assurance Course in Uzbekistan**

ICARDA-CAC organized a Training Course on Integrated Seed Quality Assurance held from 4-8 June 2007 in Tashkent, Uzbekistan under the FAO-TCP Project (TCP/UZB/3002). Dr Amir Amanov, Advisor on Agriculture in the Office of the President of Uzbekistan officially inaugurated the training course. Dr Amanov thanked ICARDA and FAO for organizing the training course and assured further collaboration not only in seed production of cereals legume, oilseed and forage crops, but also in other agricultural crops. Present during the inauguration session were Dr S. Beniwal, Regional Coordinator, ICARDA-CAC, Mrs Anny van Pijlen, Training Facilitator, FAO, Dr Z. Ziyadullaev, from Ministry of Agriculture and Water Resources and Dr Zakir Khalikulov, ICARDA-CAC.



*Participants of the seed quality assurance course in Tashkent, Uzbekistan*

The participants were presented with theoretical and practical aspects of seed quality assurance and ISTA accreditation. The course covered the theory and practical aspects of purity, germination and tetrazolium test and the use of ISTA handbooks and Rules. Mrs Anny van Pijlen and Dr Aziz Nurbekov delivered the lectures and organized practicals. The skills acquired will help the participants implement an effective seed quality assurance and increase the efficiency in maintaining the desired seed quality attributes according to ISTA rules.

Prof. Abdushukur Khanazarov, Deputy Minister of MAWR and Director General, Uzbek Scientific Production Center for Agriculture distributed certificates to participants.

*Aziz Nurbekov, FAO TCP, ICARDA-CAC, P.O. Box 4564, Tashkent 700000, Uzbekistan; E-mail: a.nurbekov@cgiar.org*

## HOW TO

**T**his section provides technical/practical information for technical staff involved in seed production and quality control.

### **How to No. 34: Simplifying Physical Purity and Number Count Test**

In seed testing, raw (un-cleaned) and cleaned seed may need to be analyzed for physical purity and number count test:

- To ensure that seed price paid to contract growers reflects the quality of seed produced and delivered
- To identify proper machinery for cleaning and grading seed lots
- To determine if seed lots meet quality standards for certification

The type and amount of impurities in raw seed lots varies depending on several factors. For example, the impurity of small seeded grasses such as *Dactylis glomerata* is naturally high and difficult to distinguish from the pure seed because the empty and full florets look rather similar. For most field crops, however, the difference between pure seed and impurities can be easily distinguished, but the rate may considerably differ from one seed lot to another depending on growing conditions and harvesting methods. The rate of impurities in hand harvested, threshed and winnowed seed lots are usually low compared to combine harvested large seed lots. In the former, the rate of breakage, inert matter and other seeds are usually low whereas in the later it is much higher because of mechanical operations such as drum speed and concave clearance which may lead to breakages particularly under conditions of low seed moisture content or excessive drought. Seed samples from such seed lots are very tedious to analyze for physical purity and number count test. In order to simplify the task of seed analysts handling large number of samples in seed testing laboratories, two methods are employed:

#### *Seed blowers*

Blowers are commonly used for testing small seeded grasses. They consist of an aspiration system, which generates the air stream, and a vertical glass tube through which the air stream travels during operations. The glass tube is closed at the bottom with a piece of fine mesh on which the purity working sample is placed and at the top with a two overlapping glass lids which can be rotated to adjust the speed of the air current generated by the aspirator. When operated, the air goes



through the working sample, lifts up light contaminants such as empty florets, chaff, immature and shriveled seeds, and drops them into the cavities located under the top rotating lid for collecting light impurities. If the blower is calibrated well using standard samples (e.g. ISTA calibration samples) the lifted portion represents the lighter impurities whereas the portion, which is not lifted by air current, represents the pure seed fraction, other seeds and heavy impurities, if any, and can be separated mechanically.



*Seed blower showing heavy(left) and light (right) fraction*

#### *Hand screens*

The machine consists of a shaking deck with set of screens with different sizes and perforations. When the sample is placed on small screens with the right perforation shriveled, immature, broken, weed seeds and small soil particles pass through whereas the pure seed and weed seeds remain on top and can be removed from the pure seed fraction. The screen system is used mostly for combine harvested seed lots of small to large seeded

field crops for which light contaminants are removed effectively during harvesting. The hand screens can also be used to select the right screens for cleaning seed lots. Using this simple method, the physical purity and number count tests can be simplified considerably and efficiency and effectiveness increased significantly.

*Abdoul Aziz Niane, Seed Unit, ICARDA, P.O. Box 5466, Aleppo, Syria; E-mail: a.niane@cgiar.org*

## RESEARCH NOTES

**S**hort communications on practical research or relevant information on agriculture or seed technology are presented in this section.

### **Bean seed flow and exchange networks in Southern Ethiopia**

Asrat Asfaw<sup>1</sup>, Conny Almekinders<sup>2</sup>,  
Getahun Degu<sup>1</sup> & Fistum Alemayehu<sup>1</sup>

#### *Introduction*

Under the influence of commercialization of bean production, the seed system in Southern Ethiopia is changing rapidly. This can offer opportunities as well as present new constraints. In order to anticipate the future direction, it is important to understand what sources of seeds and varieties farmers use, and for what reasons. It is also relevant to know new and old seed actors in the system. This text provides a short overview of current sources and actors and raises concerns on the basis of recent experiences.

#### *Background*

Common bean (*Phaseolus vulgaris* L) is one of the principal grain legumes in Ethiopia. The crop is grown under diverse farming systems and agro-climatic conditions; either as mono-

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crop or inter-cropped with maize, sorghum and coffee. The Southern Regional State (SRS) and the central Rift Valley are major belts of bean production in the country. The crop is not indigenous in Ethiopia, and as a result does not show high genetic diversity in comparison with other 'centers of diversity' like Central America, Andean Region and some African countries (CIAT, 2002). Bean is principally cultivated for home consumption but is rapidly evolving into a cash crop in recent years. Bean is an important source of proteins for lower income households and cash crop for small-scale farmers. This makes the crop strategic in alleviating malnutrition and ensuring food security.

Farmers in Ethiopia obtain bean seeds for planting from different sources. About 1.73% of bean farmers at national and 1.43% of bean farmers in Southern Regional State used improved seeds in the 2003/04 *meber* crop season (CSA, 2004), presumably obtained or purchased from formal seed sector institutions. The remaining farmers plant seed they obtained from other sources. This implies that both formal and informal seed systems are operating for bean production in the region even though their degree of dominance differs greatly.

Many authors broadly divide the seed system into formal and informal sectors (Almekinders and Louwaars, 1999; Sperling and Cooper, 2003; McGuire, 2005). The latter also called the informal, traditional or farmer seed system (Sperling and Cooper, 2003). The farmer seed system is complex, dynamic and is a part of farming system and farmer knowledge. It encompasses plant/seed selection, production, storage and exchange as part of crop production process.

#### *Seed sources*

The importance of different sources from which farmers acquire seeds appears to change with time. A survey conducted in 1996 indicated that own saved seed, other farmers and purchase from local traders (market) were the major sources of white and colored bean

seed for farmers in the region (Table 1). White beans are for export whereas the colored ones are for local household consumption. In 2004, a similar survey showed that farmers' seed sources broadened and included seed projects and seed aid as important new seed sources (Table 1). In both years, own saved and local market remained the main bean seed sources.

Table 1. Farmer bean seed sources in Southern region in 1996 and 2004

Seed sources	Farmers (%)		
	1996		2004
	White beans	Colored beans	All bean types
Own saved	23.3	26.6	28.3
Friends/relatives /other farmers	37.9	27.9	14.2
Local market	24.6	19.5	33.3
Seed project/seed producers	-	-	14.1
NGOs	10.7	19.5	<sup>3</sup>
BoA/Extension	3.5	6.5	1.0
Seed aid	-	-	9.1

Source: SARC socio-economic division survey data

In 1996, survey results indicated that NGOs and other farmers within the community were the main initial seed sources for white bean varieties under production whereas local market and other farmers within the community were the sources for colored bean varieties (Table 2). In 2004, a similar question showed another picture of original sources of the varieties grown by farmers: friends, relatives and other farmers had become much less important sources for new seed lots of the varieties (old or new) than the seed projects and markets (Table 2). The possible reason might be the low yields as a consequence of drought and poverty, forcing

<sup>3</sup> NGO provided seed as part of seed aid: in the survey year seed aid was provided by both GOs and NGOs due to drought

farmers to source seeds from outside their communities. This could lead to introduction of new bean varieties. This is reflected in the appearance of seed aid as a new source of seed. Seed projects are known to principally have distributed new varieties to farmers who were engaged in different forms of farmer-based seed production, cooperative or individual farmers. It is a kind of semi-formal system in which the Ethiopian Seed Enterprise involved individual farmers as well as farmer cooperatives in contract seed production where the farmers are allowed and encouraged to retain 10% of the seed for local exchange or sale. This presumably contributes to introduction of seeds of new varieties, especially improved varieties.

Table 2. Initial seed sources for bean varieties used by farmers in 1996 and 2004 cropping season in Southern region

Initial sources of a seed lot for	Farmers (%)		
	1996		2004
	White beans	Colored beans	Both seed class
Friends/relatives/other farmers	56.3	52.3	13.4
Local market	12.5	40.0	38.5
Seed project	-	-	39.4
Seed aid	-	-	8.7
NGO	25.0	2.3	-
Research	6.2	0	-
others	0	5.4	-

Source: SARC socio-economic division survey data



Beans in local market used as source of grain or seed

#### *Bean seed flow and grain market channels*

Farmers in the region obtain bean seeds from different sources and presumably use different channels and exchange mechanisms. The informal seed system is traditionally the dominant seed source for beans in the region. Based on information from other crops and regions it can be assumed that bean seed flows within and between the communities through established social networks.

Beans are evolving as cash crops in the region. Farmers sell their produce in local markets (see picture), to grain collectors or farmers' cooperative unions in the form of grain or seed.

The grain collectors and farmers' cooperative unions sort 'good' grain and sell it back to farmers as seed at time of planting. The grain collectors/traders were important bean seed suppliers in the region at time of relief seed aid. The grain traders/collectors participate in seed fairs organized by NGOs and transport seeds from long distances to sell in the seed fairs.

There are two major market routes for beans from the Southern region: Shashemene-Dilla-Moyale and Shashemane/Zeway-Mojo/Nazareth-Djibouti routes. The Shashemane-Dilla-Moyale (Ethiopia-Kenya border) grain market route is operated by traveling traders and has the highest share of the market for small red and red mottled beans. The Shashemane/Zeway-Mojo/Nazereth-Dijibouti route is mainly operated by bean exporters and is dominated by white pea beans. The bean seed and grain flow involves four key players: farmers, collectors, bulking agents, and traveling traders/exporters.

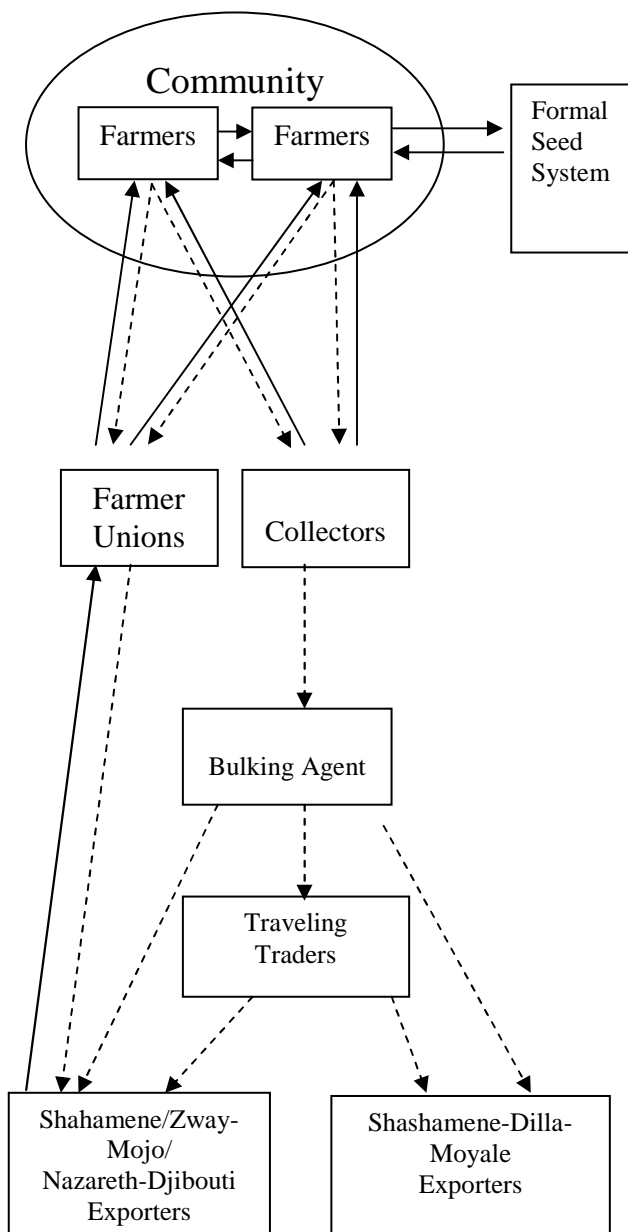


Figure 1. Bean seed flow and grain market channels in southern region

-----> Grain flow  
 —————> Seed flow

In recent years, government is supporting strong intensification of bean production including areas not previously reached by research and improved technologies via specialization and diversification programs. The intensification program aims at linking bean production with export markets for which seeds of preferred varieties, white seeded varieties in this case, require large-scale multiplication and distribution. Nevertheless,

the program was constrained by huge seed shortages. To mitigate this shortage, exporters from Nazareth were involved in supplying seeds to farmers. The exporters sorted and cleaned the bulked grain which they then sold as seed to farmers. The exporters supply seed to farmers and get back grain produced by farmers. This route has introduced new varieties in the South but the issue of seed quality and availability needs attention. The involvement of exporters in creating market access to bean seed is a recent phenomenon that shows potential for scaling out of bean technology.

Farmers' cooperative unions played a pivotal role in seed and grain marketing in the region. The unions buy seed from exporters, other cooperative unions, farmer seed producers, formal sector seed enterprises or research centers and distribute the seed to farmers engaged in grain production. Similarly, the cooperative unions collect grain from farmers and sell it to exporters. The cooperatives were backed by NGOs, Bureaus of Agriculture and Rural Development (BoARD) and research at different levels. In this regard, an NGO named Self-help international southern capacity building program, can be mentioned as key actor supporting the strengthening of seed system in the region.

Figure 1 describes the bean seed flow. There is close interaction in varietal and seed exchange between the formal and informal sectors. The formal sector implements participatory varietal selection, and provides seed for farmer-based seed production programs or directly distributes seeds to farmers. The formal sector is also involved in collecting seed from farmer-based seed schemes, cleaning and redistributing the seed to farmers. In general there are different bean-seed flow networks that evolved through time in the region (Figure 1).

#### Conclusion

In general, bean seed and grain flow involves several social networks and actors.

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Farmers access and use bean seed from different sources and channels, i.e. farmer-based seed sources and other formal and semi-formal seed sources like Ethiopian Seed Enterprise, agricultural research centers, BoARD, farmer cooperatives and NGOs. The farmer-based seed sources are represented by own saving, friends relatives, other farmers within and outside the community and local market. The own-saved seed and local market remain the dominant seed sources, but are decreasing in importance, possibly because of increasing drought and poverty. Related with this may be the decrease of importance of other farmers in the community as a source of new seed or new varieties. It is however not clear how demand and supply mechanisms interact and can explain the changes being observed.

Commercialization of bean production in the country brings different actors together to work more closely. New actors and new seed sources have emerged. The newly evolving multi-institutional partnership in seed delivery could give farmers quick and wider access to new varieties (Rubyogo *et al.*, 2007). Nevertheless, in the context of the Southern region the focus of the cooperative and other seed actors (research, NGOs, BoARD) is to quickly making available large volumes of seed for distribution to farmers, to respond to market opportunities for bean grains. However, the issue of seed quality has been overlooked. It was observed in the recent seed distribution in the Southern region, that seeds from particular sources were not germinated in many farmers' fields. Moreover, the actors are promoting white beans in red bean dominated area. Of course, it can be argued that if there is a market, farmers can produce for sale improving their livelihoods. However, without understanding seed provision (which actors providing what kind of seed) this can result in disappointing conclusions. Since ensuring seed security has a wider impact it seems wise to understand what seed sources

and new varieties farmers use and for what reasons.

#### References

1. Almekinders, C. and N. Louwaars. 1999. Farmers' seed production: new approaches and practices. London: Intermediate Technology Publications, Ltd.
2. CIAT, 2002. Participatory plant breeding with women and small farmers in Africa and Latin America: Final report to Department for International Development (DFID), Cali, Colombia, CIAT.
3. CSA. 2004. Agricultural sample survey 2003/2004. Report on farm management practices. Private peasant holding, *Meber* season. Statistical Bulletin no 305, Addis Ababa.
4. Rubyogo, J.C., L. Sperling & T. Assefa. 2007. New approach for facilitating farmers' access to bean seed. LEISA Magazine 23.2
5. McGuire, S. 2005. Getting genes. Rethinking seed systems analysis and reform for sorghum in Ethiopia. PhD thesis, Wageningen University.
6. Sperling, L. and Cooper, D. 2003. Understanding seed systems and strengthening seed security. A background paper on effective and sustainable seed relief: a stakeholder workshop, 26 - 28 may 2003, FAO, Rome, Italy.

#### MEETINGS AND COURSES

**A**nnouncements of meetings, seminars, workshops and training courses appear in this section. Please send us announcements for national, regional, or international workshops, seminars and training courses organized in your country for inclusion in the next issue.

#### Conferences

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**Asian Seed Congress 2007, 6-10 November 2007 EDSA Shangri-La, Manila, Philippines.** APSA greets “*Mabuhay!*” in this year’s Asian Seed Congress. APSA lives up to its claim as the easiest access to the most dynamic region in the global seed industry by once again gathering business executives, academicians, scientists and researchers, government officials and all others involved in the global seed industry in the Asian Seed Congress 2007 which will be held from 6-10 November 2007 in EDSA Shangri-La, Manila, Philippines.

The Philippine Seed Industry Association (PSIA) will host the event expecting more than 700 participants. The preparation is in full swing. It includes a bigger number of trading tables and exhibition booths, four technical session topics, special interest group workshops and meetings on vegetable, hybrid rice, and tropical forages and grasses. Also included in the program are special meetings on international trade, quarantine, IPR and seed testing. Post conference tours include visits to IRRI, the Philippine vegetable capital - Baguio City, and to major local seed companies.

Early registration runs until 31 August, 2007 offering discounts on fees. For registration or more information visit <http://www.apsaseed.org> or email [lovely@apsaseed.org](mailto:lovely@apsaseed.org).

**8th AFSTA Annual Congress 2008, 26-29 February 2008, Casablanca, Morocco.** The 8th AFSTA General Assembly will be held in Rivoli Hotel, Casablanca Morocco in North Africa. Registration starts in mid-November 2007. The Congress will be organized by the Moroccan Seed Association (AMSP) and the address of the Secretariat is: AMSP, 2, rue El Kaf Apt. No 1 Hassan, Rabat, Morocco; Tel: +212-37-26.35.00; Fax: +212-37-263501; E-mail: [amsp@iam.net.ma](mailto:amsp@iam.net.ma). More information will be available in due course at AFSTA website [www.afsta.org](http://www.afsta.org).

**First Global Conference on GMO Analysis, 24-27, June 2008, Villa Erba, Como, Italy.** The

conference will be organized under the leadership of the European Commission/Joint Research Center. It deals with all aspects of GMO analysis in seed, food and feed and structured in three themes: (i): Requirements for the implementation of GMO analysis along the production chain;(ii) Method developments and applications; and (iii) Harmonization, standardization and accreditation – the way to quality assurance. Please note that information and registration details for the conference can be found at <https://www.seedtest.org/stream/nl-l---1--%40a3a28d620689--55.it>

**9th ISSS Conference on Seed Biology, 6-11 July 2008, Olsztyn, Poland.** The conference of International Society of Seed Science (ISSS) will be held at the University of Warmia and Mazury in Olsztyn, Poland. The theme of the conference will highlight the recent advances in seed science and research and will include seed development and maturation; seed dormancy and germination; seed ecology; seed stress tolerance; seed technology; seed germplasm preservation and alternative seed uses. For more information, please contact: E-mail: [info@seedbio2008.pl](mailto:info@seedbio2008.pl) or visit the website at: [www.seedbio2008.pl](http://www.seedbio2008.pl)

#### Courses

##### ISTA Training Workshops in 2007

ISTA pleased to announce the following ISTA Workshops scheduled for the coming period:

##### *Vigor Testing Workshop*

Location: Seed Technology Centre, Ege University, Izmir, Turkey

Date: 04 – 06 September 2007

<https://www.seedtest.org/stream/nl-l---1--%40a3a28d620689--51.html>

##### *Workshop on Seed Sampling of Agricultural Seeds*

Location: NAK, Emmeloord, The Netherlands

Date: 11 - 14 September 2007

<https://www.seedtest.org/stream/nl-l---1--%40a3a28d620689--52.html>

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*Moisture, Purity and Germination Workshop*

Location: GEVES - SNES, Beaucouzé, France

Date: 08 – 12 October 2007

<https://www.seedtest.org/stream/nl-1-1--%40a3a28d620689--53.html>

For detailed information or to register, please click on the respective links above or at <https://www.seedtest.org/en/workshop.html>

## LITERATURE

**L**iterature, books and journal articles of interest to readers are presented here. Please send information on seed publications on policy, regulation, and technology to the Editor for inclusion in *Seed Info*.

### Books

**Yadav, S.S., R Redden, W. Chen AND B. Sharma (eds.) 2007. Chickpea Breeding and Management.** The chickpea is an ancient crop that is still important in both developed and developing nations. This authoritative account by international experts covers all aspects of chickpea breeding and management, and the integrated pest management and biotechnology applications that are important to its improvement. With topics covered including origin and taxonomy, ecology, distribution and genetics, this book combines the many and varied research issues influencing production and utilization of the chickpea crop on its journey from paddock to plate. Chapter 20 by A.J.G. van Gastel *et al.* deals with chickpea seed production Published by CABI; Hardback 978 184593 213 8; Price, US\$198; 448 pp

**Thomson, J. A. 2007. Seeds for the Future: The Impact of Genetically Modified Crops on the Environment.** The complicated scientific, environmental, legal, cultural, and ethical issues surrounding genetically modified (GM) crops are being hotly debated all over the

world. In *Seeds for the Future*, an internationally respected molecular geneticist and food researcher, Jennifer A. Thomson, describes how these crops are developed, distributed, and regulated.

Genetically modified (GM) crops and their impact on native species, the environment, and human health have been topics of international debate for many years. The author attempts to put the issue in perspective with a clear and objective scientific explanation of genetic engineering and its role in producing disease-, weed-, insect-, virus-, and drought-resistant soybean, maize, canola, cotton, beets, bananas, cassava, potatoes, and other crops providing higher yields and making healthy food available to millions of people. ISBN: 978-0-8014-7368-5; Price: \$24.95; 208 pp; [http://www.cornellpress.cornell.edu/cup\\_detail.taf?ti\\_id=4693](http://www.cornellpress.cornell.edu/cup_detail.taf?ti_id=4693)

### Useful Websites

Agri-biotech in sub-Saharan Africa ([http://www.scidev.net/agribiotech/sub-saharan\\_Africa](http://www.scidev.net/agribiotech/sub-saharan_Africa)). Read the latest spotlight on the current status and future prospects for agricultural biotechnology in sub-Saharan Africa. The collection includes a review of the changing attitudes to biotechnology in the region and facts and figures outlining existing initiatives.

### New Journals

#### *Arab Journal of Water*

The Arab Journal of Water is a scientific refereed Journal published twice a year by the Arab Water Council. The mission of the Journal is to contribute in solving Arab and Regional water issues by publishing scientific papers in the areas of integrated water resources management, water policies, trans-boundary water issues, water conflict and diplomacy. In addition, the Journal addresses traditional water issues in different sectors, namely; urban, industrial, agricultural and transportation.

The Journal will publish research papers, review articles, technical notes, case studies and

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progress reports in all management and policy aspect of water resources in the following areas. Papers in Arabic language are encouraged but papers in English can be accepted if they address the water problems of the Arab countries and the region. For more information contact: Dr Muhammad Shatanawi, Editor in chief, Arab Journal of Water, P.O. Box 13042, Amman, Jordan; E-mail: shatanaw@ju.edu.jo

*African Journal of Environmental Science and Technology*

The African Journal of Environmental Science and Technology (AJEST) is currently accepting manuscripts for publication. AJEST publishes high-quality solicited and unsolicited articles, in English, in all areas of Environmental science. All articles published in AJEST will be peer-reviewed.

The African Journal of Environmental Science and Technology is fully committed to providing free access to all articles as soon as they are published. Instruction for authors and other details are available on the website <http://www.academicjournals.org/AJEST>. Prospective authors should send their manuscript(s) to [ajest@academicjournals.org](mailto:ajest@academicjournals.org).



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# Final Announcement

## Second International Seed Trade Conference

### 2007

### (Second ISTC2007)

The National Seed Council of Egypt, the Turkish Seed Industry Association (TURKTED) and ICARDA will organize the Second International Seed Trade Conference 2007 in CWANA Region, to be held from 19-21 November 2007 in Cairo, Egypt.

The conference aims at promoting seed trade within and between the CWANA region and the rest of the world. The conference will not only provide opportunities for seed trade, but also contribute to dialog between the private and public sectors on harmonization of regulatory frameworks to promote seed trade in the region. A major focus of the conference will be trade exhibitions by seed companies, seed equipment manufacturers, agricultural input supply companies, and agricultural machinery manufacturers. Companies interested in participating in the conference or exhibiting their products should contact the conference secretariat.

### Conference Venue

The conference will be held at Mena House Oberoi, Cairo. Surrounded by 40 acres of scented gardens, the historic palace hotel, built in 1869, is only 700 meters from the Pyramid of Cheops. The hotel is located in Cairo's Giza district, 15 km from the city center and 35 km from the airport.

### Conference Information

More information on the conference visit the websites:

ESAS: <http://www.esas-egypt.org> (Arabic and English)

ICARDA: [http://www.icarda.org/announcement/seedtradeconf\\_nov07.htm](http://www.icarda.org/announcement/seedtradeconf_nov07.htm) (English)

National Seed Council: <http://www.seedcouncil.gov.eg> (Arabic & English)

### Conference Secretariat

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