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REPORT

ISF WORLD SEED CONGRESS

ATHENS, GREECE

2013



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ISF WORLD SEED CONGRESS

ATHENS, GREECE

27 – 29 MAY 2013

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OPENING CEREMONY

**Alexandra Trianti Hall, Megaron - Athens
Concert Hall**

Monday, 27 May 2013

- ❖ The Master of Ceremonies, **Ms. Rika Vagiani**, welcomed the participants and introduced a group of musicians and dancers from 'Dora Stratou Dance Theater', who perform traditional songs and dances from different regions of Greece. They started with Macedonia in the northern part of the country.
- ❖ Ms. Rika Vagiani went on to tell the story of Demeter, the goddess of the harvest, from an ancient Greek myth.
- ❖ The Master of Ceremonies gave the floor to **Mr. Vasilis Paisios**, Chairman of the National Organizing Committee:

"Presidents, ladies and gentlemen, friends

Good morning

Let me welcome you to what came to be the biggest in participation - so far - ISF conference, almost 1,600 delegates from every corner of the earth. Thank you for deciding to come to Greece. I am sure it will be rewarding.

We, in the National Organizing Committee had a mission to accomplish in an intimidating relativity. We followed Brazil, an emerging economy with 60 mil ha of agricultural land. We are followed by China, another emerging economy of 115 mil ha of agricultural land. Just two years back we were a submerging economy. We have 3.7 mil ha of arable soil.

Yet we in Greece believe that value does not stick necessarily on numbers. Greece gives you the opportunity to live in a beautiful country with deep and rich culture and in our case, a very versatile farming which focus more and more on quality. You are going to receive in the course of this congress figures and stats of the Greek agriculture, but between Brazil and China our image would have been inconsequent. So we'll try to show our fascinating land in the Spring light, our ancient glamour and modern clubbing (not a contrast by itself) and introduce to the old secrets of the Greek cuisine based on the yields of our ancient fields managed by modern agricultural techniques and selected varieties which we all, in our trade unceasingly produce and promote.

Only 3.7 ha of arable land yet they produce plenty and attract the business interests of a lot of people and offer job to many. The results we are confident, you will find incomparable and unforgettable.

"The wealth of Nations"

I hope the famous author would not mind that this morning, I dare use the title of his famous book restrictively on Agriculture. But I find it the most

appropriate depiction for this extraordinary victory of the mankind to start tilling the earth ten thousand years or so ago giving birth to Agriculture. That remote moment of the past was the Big Bang of today's societies. With the humble settlements close by, that expanded to towns and later to cities. The birth of encoding the human relations and all crafts and arts and sciences that flourished once the basic need-food-was securely provided.

And whatever you may hear agriculture is the first human profession-at least the first that one can be proud of professing, that made the earth an altogether different place. And I am proud and I believe all of us dealing with the improvement of the agricultural production feel the same because we supply in the end the most important element for the sustenance of the civilized humanity. And this is the real wealth of the nations.

Today Agriculture is a small component of in the world economy. Its contribution, to the advanced countries GDP, moves between 2.5% to 4.5% and this creates a mathematical paradox. Are all numbers of equal value? Does a two digits decrease in global Agricultural output equals the same as a two digits decrease in oil or textile production? Let one of the billion hungry people reply to this. Our job is to keep an upside down pyramid steady. That's our world. Our science is to keep this wealth of the nation's go on.

The seeds and the world we live in:

This morning I will not bother you with the scary Malthusian images. We are all aware with the statistics of population increase of hunger and undernourishment or the depletion of fisheries, the limitations of the fossil fuels and all the conceivable risks that sum up our fee to the contemporary civilization. One can browse them easily from the web and one should, for we all have to know the context in which we act professionally so that to align his functioning accordingly.

But thinking of all the above we can conclude that we are doing a good job and a sustainable one at that. Because although the birth rates trends seem to forecast a slower growth of the population the erasing of the hunger and malnutrition still remains a challenge. The increase of the wealth of vast numbers of population, which we witness today, would further increase the demand for quantity and quality of food and of clothing. The inevitable increase in the demand of vehicles will multiple the demand of fuels. The inevitable shortage of water will top the need of the genetic material improvement.

Therefore the research for new varieties will not and should not stop. New traits enhancing quality, tolerances or productivity under distress conditions of water shortage or high salinity would be crucial for the improvement of the living standards of

hundreds of millions of mostly deprived people. The need to regulate the transfer of the benefits of our work to other places, the intellectual property rights, or whatever is connected with the fair exchange of matters of such vital importance should be well balanced and aim to the greater good.

For the creation, preservation and fair trade of seeds is more a mere business for us. It is more the increased revenues we offer to the farming society. It is a gift to the future generations.

Every time I attend a congress I always ask myself what it is that made me wiser. The value of ISF congresses is their big participation - this year exceptionally so.

The possibility to meet other people of your trade from places far apart, to learn new efforts and approaches might be decisive for one's future. To have a nice time is also important. We believe that in Greece you shall have both. We live in a hard competitive world. Good meetings are valuable. So are good moments. In Greece you shall have both. And we shall bear in mind that we do a sustainable and good job though it rarely takes the proper attention. It is mostly due to our small participation to national GDPs.

Well if anything Greece can teach is that small numbers sometimes bear big values. Our case is such.

I wish you a very successful congress."

- ❖ The Master of Ceremonies gave the floor to Mr. **Garlich von Essen**, Secretary General of the European Seed Association.

Mr. von Essen made a presentation 'The neonic saga, a story from Europe – and lessons to be learned'. He outlined the differences in interpretation of the benefits of technologies and innovation. On the one side there are reports such as The perfect storm, the Future of farming and the Foresight report, underlining that technologies and innovation are part of the solution to the major challenges that the planet is faced with, whereas on the other side certain NGO's consider that technologies and innovation are the threat. On the one side industry sees science to drive food security, whereas these NGO's feel that science is flawed and only drives profit. After the bee loss incident in Germany, the industry came with a technical solution to a technical problem, whereas the NGO's called for alternative 'independent' science and the precautionary principle. Both sides were reaching out to politicians but unfortunately in May 2013 the European Commission adopted wide-scale restrictions of the authorizations of three neonicotinoids and specifically for seed treatment.

A strong alliance was formed of seed, crop protection and seed treatment industry, together

with farmers and other parties to demonstrate the value of the technology beyond the owners, and this led to the Compass project. The resulting Compass report showed that with a ban on neonics there would be dramatic effects way beyond what was expected and billions of EURO to be lost with a negative environmental impact. He urged that the defense of technologies must become a key task for agricultural input industries' associations. To receive the necessary support, he concluded, the seed sector must address economics but also emotions.

- ❖ The Master of Ceremonies welcomed the 'Dora Stratou Dance Theater' back on stage for folk songs and dances from Asia Minor.
- ❖ The Master of Ceremonies gave the floor to **Mr. Tim Johnson**, President of ISF.

"Good morning ladies and gentlemen.

I would like to welcome you to the 2013 International Seed Federation Congress. I would especially like to welcome all the new members attending for the first time. Sixteen new members have decided to join the International Seed Federation in 2013. These include national seed associations from Afghanistan, China and Pakistan. Also, 4 associate members and 6 affiliate members. For me, it's also exciting that two "new" countries join ISF as observers: Somalia and Peru.

We look forward to bringing more members into the International Seed Federation so we continue to be the voice for the global seed industry.

Planting a seed is an act of faith. What could seem more farfetched than dropping a shrivelled, apparently lifeless speck of something into a hole in the ground and returning to find a green growing plant brimming with life? Seed is life!

People that plant seeds count on us to assure them quality seed, help them fight off diseases, and make sure that the seed creates food, feed, fiber or fuel for the people of this great earth. ISF is a strong believer in the benefits of global movement of seeds to improve grower success around the world!

Since the 2012 Congress in Brazil, the seed industry has continued to work hard at providing high quality seeds for all parts of the world. In Indiana last year where I live in the United States, we had a challenging year for seed corn growing, but the seed industry of South America was there to help provide additional high quality seed that was planted in the mid-west this spring. That is just one example of what the seed industry does globally and what the International Seed Federation supports on behalf of our members, their countries and the people of their nations.

The International Seed Federation needs to continue to work on mobilizing the seed industry

for the benefit of all seeds from alfalfa to zucchini, from organic to biotechnology and all the opportunities in between on behalf of the industry. This also includes all of the business-to-business opportunities to support the seed industry, our members and growers!

Seed treatments and coatings will continue to be a valuable part of increasing the potential of each individual seed. We now call them Seed Applied Technologies!

Additional technologies will help all breeders from organic to biotechnology unlock more potential in their breeding efforts to help our seed in the challenging areas of the world. Technology will continue to improve the grower's ability to produce a crop for their families, friends, neighbors and the world!

Promoting seed on behalf of the members and strengthening the image of the seed industry is what the International Seed Federation is responsible for doing. We need to do it as one voice. We need to be the strong voice on behalf of all of the seed industry. We will not be the loudest voice. There will be loud voices in every area that impacts the movement of seed. There will be loud voices that will only want to speak on behalf of their interest and not think of other seed people. This is where the International Seed Federation has to work together at all levels from our national seed associations, regional seed associations and secretariats office. Most importantly, involve all of our members.

Our members volunteer a lot on behalf of the seed industry. We need to make sure that the voice the people hear is for all of the seed industry. When people respect and understand that our voice is thinking, acting and bringing opportunities for global movement as one voice, it will be the strongest voice. It won't be the loudest, but it will be the voice that we want people to hear when they ask, "How best to move seed globally so more people benefit from high quality seed that our members provide?" The International Seed Federation needs to provide the best solutions to support the global movement of all seeds. Seed is life!

Marcel will share with you a lot of the activities that the International Seed Federation and our members have participated in this year. We continue to improve the speed for activities by adding more conference calls, video conferencing and yes, an App! These new technologies allow us the ability to be able to act as one at a faster speed for the industry. It is not always easy and it is not perfect, but if we strive to improve, we strive to support and listen to our fellow seed people. We will be able to move faster, stronger and better for the whole seed industry.

There will be many activities these next three

days. We have two very important papers to advance to the General Assembly on Wednesday.

- ISF view on low level presence in seed.
- Industry viewpoint on indirect seed health tests.

We have very good Committee and Section meetings to discuss and understand issues regarding seed and the technologies in and around seed that impacts the movement of seed.

Thank you for participating in this record attending Congress. We have many people that will be in sessions learning, listening, contributing and bringing their expertise to the International Seed Federation so we can move seed globally better and faster. There will be people that will leave this ceremony and go do business; we hope that it is a very successful business opportunity for you. We are also going to have some fun this week. I hope you enjoy the Welcome Party, Gala, have fun with your seed friends and meet some new people in the seed industry.

In closing, I would like to thank the Greek Seed Trade Association (EEPES). These have been challenging times in Greece. You have provided a beautiful venue and an opportunity for the largest gathering of the International Seed Federation to be together. Thank You!

If you get stuck on a bus or you have to wait in line a little bit longer, take this opportunity to talk to the person next to you. There is a good chance it is a seed person and you will learn something new.

I wish you all well this week, this season and this year.

Thank you for the opportunity to share my thoughts.

Seed is Life!"

- ❖ The Master of Ceremonies gave the floor to **Mr. Marcel Bruins**, Secretary General of ISF, who provided the progress report of the ISF.

M. Bruins recalled that a 8-page progress report had been written and distributed to all ISF members with the other congress document six weeks before the congress. In his talk today he would only be presenting some of the highlights.

ISF currently had 233 members in 74 countries. The worldwide seed market was estimated to be around 47 billion USD and according to data of the World Customs Organization, the value of exported seed was 9.9 billion USD. The evolution in export figures since 1970 showed a large increase, especially in the last 7-8 years.

Online registration for the Athens Congress had closed at 1594 participants which was a new all-time record. Such high numbers also emphasized the importance of the annual congress to the ISF members, and M. Bruins presented all the different

improvements to the Congress in the past couple of years. Since 2007 there were no more lunch vouchers, and lunch was for free. In 2009 the Opening Ceremony had been limited to a maximum of two hours and in addition, the satisfaction survey and free Wi-Fi had been introduced. Since 2010 the trading floor opened earlier at 11.30 and the delegate list was presented by company and by country. 2011 was the first year in which there had been more than 300 trading tables. In recent years there had been an increased demand on reserved trading tables and since 2012 the allowed percentage of reserved trading tables was set at a higher level. 2013 saw the birth of the Congress APP with lots of added functionalities. Also the Core-PCO (Professional Congress Organizer) had started its work on the ISF World Seed Congress and this cooperation with ISF would lead to ensuring and further improving the consistently high quality of the ISF World Seed Congress.

Better tracking had led to better predictions of how many participants could be expected at the different social events, and combined with a stringent monitoring of the congress costs this had led to a slight decrease in the congress registration fee from 2005 to 2013. When offset for inflation, the decrease in congress fees was even higher. He was pleased to underline that the delegates were getting more services at a lower price.

He encouraged all to download the new APP that had been developed especially for ISF. It was the result of many members indicating that there was no longer a need neither for a printed congress program nor for a printed delegate list. In case delegates had trouble downloading or accessing it, they should go to the registration desks, where staff would be able to assist.

In the past year ISF had completed its revisions of the ISF View on IP and of the ISF Trade Rules. ISF had elevated its erstwhile Seed Treatment and Environment Committee (STEC) to a regular Standing Committee within ISF with the new name: Seed Applied Technologies Committees (SAT-Com). And a position paper had been adopted on a single access and benefit sharing system.

Recently ISF had initiated the request for an International Standard for Phytosanitary Movement (ISPM) specifically for seeds. The Commission on Phytosanitary Measures had now started the drafting work and ISF had been requested to nominate an expert to the Working Group. Also within ISF an *ad hoc* working group had gotten together and identified several priority issues. The ISF WG had drafted 13 papers on topics that must be addressed by the standard. These papers would serve ISF and the national seed associations to reach out to the regional and

national authorities outlining the view of the seed industry.

Also in the past year the ISF report “Collection Systems for Royalty in Wheat – An International Study” had been finalized. The study had collected market data from 14 countries showing a wide range in efficiency, ranging from 20% to 94% of royalties collected. The study also indicated that having a *sui generis* IP system alone is not enough, and support is needed by enforcement tools, including mandatory certification procedures, seed laws or strong government support. The highest efficiency was found in countries where Farm Saved Seed remuneration was collected in addition to certified seed royalties.

For many years now ISF was providing a Seedsman Errors and Omissions program through Iris Insurance Brokers. Recent statistics had shown that the order count of companies taking an insurance with Iris was higher than before, and more and more companies were taking the so called ‘catastrophe cover’. As the amount of claims and the height of claims was also increasing, M. Bruins encouraged all companies to consider taking insurance as provided by Iris. He also warned for non-seed expert insurance firms as these were not able to provide the tailor-made coverage as provided by Iris.

He wished all a good congress and thanked the participants for their attention.

❖ The Master of Ceremonies introduced **Mr. Zhang Xuegong**, President of the China National Seed Trade Association.

“Ladies and Gentlemen,
Good Morning!

I come from China. As the President of China National Seed Trade Association, I’m greatly honored to participate to the ISF World Seed Congress 2013 in Athens.

China is a large country with a huge population of 1.35 billion people. At the same time, China is a big agricultural country. Our total grain output reached 587 million tons in 2012. In the past few decades, China’s agriculture has made a remarkable achievement. By farming on 9% of the world’s arable land, we feed 22% of the world’s population.

Seed industry is the foundation of agriculture. At present, China’s seed demand takes the first place in the world. It is also one of the largest seed markets globally. In 2012, the total sales of the Chinese seed market were more than 10 billion dollars, and its market size keeps expanding rapidly. In recent years, China’s seed industry has experienced a fast development in technology progress and international communication. The successful breeding and promotion of Chinese hybrid rice not only make a significant contribution

to protecting China's grain security, but also extend to the countries in Asia and Africa, playing an important role in meeting the world's increasing demand for grain. In addition, China's seed import and export volume is on a rise year by year. It makes up a crucial part of the global seed market. Currently, the Chinese government attaches great importance to the seed industry development. While enjoying rapid growth and a favorable environment, China's seed industry is at a critical historic moment, and is unfolding numerous opportunities for all the friends from the global seed community. Here on behalf of the China National Seed Trade Association, I would like to warmly welcome you to China, to invest in China, and set up partnerships in China.

Today, we get together in Athens by the beautiful Aegean Sea and sacred Olympic Mountains to share the outlook of the world seed industry. Next year, the ISF World Seed Congress will be held in Beijing, and the ISF's flag will be waving by the Great Wall. I believe next year's Congress would be a high-level grand gathering with a strong Chinese flavor. It will not only enhance the communication between the Chinese seed industry and the world seed community, but will also inject a new dynamic and energy into the global seed development. I hope there would be many friends coming to Beijing to experience the warmth and hospitality of the Beijing people, and to touch the five thousand years of glorious civilization of the Chinese nation.

Beijing welcomes you. Let's have a date with Beijing and see you all next year.
Thank you!"

A video presentation invited all the participants to attend next year's congress in China.

- ❖ The Master of Ceremonies called the 'Dora Stratou Dance Theater' for their final performance of some of the most popular Greek traditional dances.
- ❖ The Opening Ceremony was closed and refreshments were served in the Foyer of the Concert Hall.

* * *

Report of the Open Meeting of the Breeders Committee

Held on Monday, 27 May 2013

Chairman: **Mr. Jean-Christophe Gouache** (FR)

1. Call to order, antitrust statement and adoption of the agenda

The Chairman called the meeting to order at 13.00 h and welcomed all according to the attendance list 110 participants from the following 32 countries: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, China, China Taiwan,

Czech Republic, Denmark, France, Germany, Greece, India, Israel, Italy, Japan, Kenya, Republic of Korea, Lebanon, Netherlands, Poland, South Africa, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States, Uruguay and Zambia.

He issued a special welcome to the guests from the European Commission, FAO, GCDT, IT-PGRFA, OECD, UPOV and the regional seed associations APSA, ESA, SAA.

2. Minutes of the Rio Meeting (Rio Congress Report, pp 7-10)

These minutes had been adopted by written procedure. There were no further comments.

A. Sustainable Agriculture

3. Developments in the ISF Sustainable Agriculture Committee

The Chairman gave the floor to Mrs. Anke van den Hurk, Chairperson of the ISF Sustainable Agriculture Committee who presented an overview of the work of this committee in the past year, with a specific focus on the contribution of the seed industry to conservation, sustainable use and access and benefit sharing. She also highlighted the ISF Access and Benefit Sharing (ABS) activities in 2012-2013 and looked at the upcoming activities on ABS. She addressed the question 'Can ABS systems be made to work?' by underlining ISF's preference for a single international regime for plant breeding activities within the setting of the multilateral system of the IT PGRFA. The speaker was thanked with a round of applause. There were no further questions.

4. EU implementation of the Nagoya Protocol and impact on the rest of the world

The Chairman then gave the floor to Mr. Vassilis Koutsouris, Policy Officer in the DG Environment of the European Commission, who made the presentation "Elements of the EU Commission's legislative proposal on implementing the Nagoya Protocol in the Union". As to the reasons why the EU was implementing the Nagoya Protocol (NP), he stated that in the EU there is general understanding that the NP is a positive outcome facilitating biodiversity-based research and development. The NP offers legal certainty and security, making access to genetic resources and associated traditional knowledge easier; Multiplication of ABS deals is expected to generate more benefits and the sharing of benefits contributes to biodiversity conservation and sustainable use. He then presented the main features of the legislative proposal, the next steps and the consequences for the breeding sector in the EU and outside. Towards the end he gave advice to seed companies, what to do in case of direct collection/ bio-prospecting or in case they

were of accessing genetic resources from intermediaries. In conclusion he encouraged the seed sector to establish and follow standardised procedures for tracing usage of genetic resources, including the keeping of documentation for inspections, adopt (existing) best practices and have them recognised by the EC; and develop lasting relations with trusted collections. The speaker was thanked with a round of applause.

IT-PGRFA

The Chairman recalled that the IT-PGRFA is a specialized access and benefit-sharing agreement, in accordance with the NP. Before opening the floor for questions he provided the opportunity to the representative of IT-PGRFA, Mr. Clive Stannard, to provide his views on the EU implementation.

Mr. Stannard indicated that the Treaty and the NP are in harmony with each other. The NP recognizes the Treaty and its Multilateral System as being pillars of the International Regime on Access to Genetic Resources and Benefit-sharing. He also shared his concerns over the EU implementation by stating that although in theory the EU proposals provide for the full recognition of the Treaty, in accordance with Article 4 of the NP, as a specialised regime, the administrative application of the NP in Europe can create a fait accompli, which "encloses" the Treaty, and this should be avoided. He added that the Treaty and the CBD respond to very different communities of stakeholders, with different interests and practices, and mutual respect is necessary. The Treaty responds directly to the specific needs of the agricultural community, who are the major user of genetic resources, and a major economic sector in most countries. The big difference between the CBD/NP and the Treaty is that the CBD works with private and individual use contracts, for the use of a property held in perpetuity, whereas the Treaty is based on multilateralism. Crops have been exchanged and developed across the world since the Neolithic, and cannot usefully be attributed to a single developer or developing culture. All countries are interdependent, and need resources coming from elsewhere, and all development in one place feeds back into improving food security and economic growth throughout the world generally. The Treaty therefore provides not only for multilateral access, but also for multilateral benefit-sharing. The CBD/NP is above all a privatizing instrument, whereas the Treaty is a practical way of using a pooled good, and providing multilateral benefits.

For breeders, a major problem that the Treaty addresses, and the NP does not, is the need to reduce transaction costs in accessing materials. This is one of the achievements of the Treaty, whereby the SMTA replaces any bilateral negotiations, and avoids the legal costs involved. It

is a coherent system, from the time of access until product sale, and backed up by an effective dispute settlement mechanism. The implementation of the NP in Europe should not add extra layers of administrative burden that are largely irrelevant for plant breeding, but allow the Treaty to function in a self-standing way, as a full part of the International Regime, not subordinate to, and not administratively packed under the NP, in ways that create very costly and time-consuming transaction costs for plant breeders.

Mr. Stannard concluded by saying that the fact that the EC proposals do not transparently recognise the authority of the Treaty is a potential threat to the ability of breeders to maintain the freedom to operate and low-transaction cost regime that they need to be able to continue to provide the improved crops needed to ensure food security, consumer choice, and economic prosperity. This is an ethical question, and impacts on human health, life and well-being throughout the world.

Questions

A question was raised how Mr. Koutsouris saw the wish of the seed sector to go for a single regime. Mr. Koutsouris agreed that having a single regime would be best, but with the situation of today it was not like that; there were two regimes. The IT is carved out of the NP, and all that falls under the IT is outside the scope of the NP. It could be possible to expand the Annex 1 in the future and some countries had already done so. But to say that all plant genetic resources are under the IT was in his opinion not correct.

Another participant wanted to know how the obligations can be met if future users are unknown. V. Koutsouris repeated that under the current draft breeders would have to provide information on the origin, otherwise the due diligence system would not work. He did understand that in the plant breeding sector, the origin was not always easy to find.

A third participant recalled the increasing global nature of the seed industry, and more material moving across borders. Some countries are party to the IT and/or NP, other countries are not. Clarification was needed on how a company that has activities in a no. of countries can comply with these requirements. V. Koutsouris replied that any EU legislation does not apply outside EU borders. It is to be negotiated by the provider and the user, how the resulting varieties can be used outside Europe, and under what conditions. Today everything is a matter of contract. He could not say how it will be for users in non-signatory countries, but did add that what is produced in EU may be limited in the circulation outside Europe.

Another participant wanted to know what happens if breeders bring in material from countries where the implementation of NP has not taken place yet and felt that the EU was implementing something

while globally the system is not yet in place. By way of doing this, the EU was creating a lot of problems and legal uncertainty. Mr. Koutsouris acknowledged that today very few countries have access rules, a little over 50 countries in the world. In case a breeder was sourcing material from a country where there were no access rules in place, then there were no ABS obligations. It is not obligatory for countries to have access rules in order to ratify the NP. The NP is requiring as a minimum to have user rules in place. EU member states can implement access rules a posteriori (i.e. at any time after ratification of the Nagoya Protocol).

Concerns were raised over the fact that when seeds are bought on the market, due diligence would need to be carried out. In the EU due diligence could be checked at variety registration but after that there should be no further due diligence obligations. V. Koutsouris replied that the EU Commission had considered adopting access rules, to deal with certain situations, but that the EU member states do not accept to have access rules adopted at Union level. In the case of getting access to genetic resources from trusted collections, users will be considered as having acquired the PIC and MAT in the appropriate way. When someone accesses material on the market, the buyer needs to have in one way or another, certain information whether there is ABS obligations attached to what was bought. And the only person that can give this information is the one that places the material on the market: the seller. Either the seller provides the information voluntarily upfront (e.g. on the package), or the seller does it upon request. He did issue a warning, that in case these rules were not followed the system of due diligence would collapse and this could then lead to a situation where the only way to ensure user compliance under the Nagoya Protocol will be to prohibit the use of illegally acquired resources.

The Chairman proposed that the EU pushes for an expansion of Annex 1 into all crops and that could solve the problem. However, according to V. Koutsouris, it was not that simple, as all members of the IT would need to agree on this modification of the plant treaty.

5. The Global Crop Diversity Trust

The Chairman gave the floor to Mrs Paula Bramel, Assistant Executive Director of the Global Crop Diversity Trust (GCDT), who gave the presentation "The Global Crop Diversity Trust: a Foundation for Food Security". She explained that the goal of the GCDT was to advance an efficient and sustainable global system of ex situ conservation by promoting the rescue, understanding, use and long-term conservation of valuable plant genetic resources. This was an essential element of the funding strategy of the ITPGRFA, and worked through an

endowment fund to provide continuous funding for key international ex situ collections. There was also project work involved (e.g. CWR, Genesys) to address major issues and challenges for the global genebank community. An important question was how to most effectively utilize biodiversity resources to enhance the performance of crops? A key challenge in this was to link up passport, genomic and phenotypic information on genebank accessions, which are typically recorded and managed independently. The speaker was thanked with a round of applause.

One participant mentioned that of the 20 action points in the Global Plan of Action (1996), the GCDT had achieved at least 3 of those, which was a huge accomplishment, and wondered if there was any recognition for this achievement by the global community. The speaker replied that while there are struggles with the implementation of the IT, it was good to remember from time to time that it is possible to make a difference.

Another participant inquired how to prioritize among the genebanks which to support. The speaker stated that priorities lay with the Annex 1 crops or collections otherwise covered by art. 15 of the IT-PGRFA. But the GCDT was trying to find ways of dealing with 'at-risk' collections of non-Annex 1 collections. The focus was on food security and long term support for international collections.

As vegetables were largely not covered by Annex 1, the question was raised where vegetables fitted in the activities of the GCDT. Mrs Bramel replied that the GCDT was particularly interested in vegetables, because in this crop sector there were a lot 'at-risk' collections. Within the regeneration program funds were provided to AVRDC and she hoped that AVRDC would place their collections under Art. 15. The GCDT would work with collections that are not in Annex 1 if it was agreed to make the collections available under the Multi-Lateral System (MLS). Linked to this was a similar question, asking whether the AVRDC accessions that had been regenerated were now available under the MLS, and how to find out which these are. Mrs Bramel indicated that indeed those accessions were now available under the MLS, and some of the material could be found in the Genesys system or get in touch with the GCDT. The GCDT was aiming to avoid redundancies in the different databases as much as possible.

B. Intellectual Property

6. General developments in UPOV

The Chairman gave the floor to Mr. Peter Button, Vice Secretary-General of UPOV to present the recent developments in UPOV. Mr. Button presented changes in people at the UPOV Secretariat, an update on membership & recent statistics on Plant Breeders Rights (PBR). He went

over guidance and information documents (PLUTO database; UPOV Collection; Distance learning courses; events in Geneva) and also mentioned selected developments with other organizations. Under that topic he highlighted the work on the Electronic Application Form, the discussions on organizing a joint meeting of UPOV BMT in 2014 with ISO, ISTA and OECD, and including breeders. Also UPOV's contribution to the work of a multi-stakeholder team on enhancing public-private partnerships in pre-breeding was mentioned as well as recent interactions with ISF. The UPOV Consultative Committee would discuss the issues that had been raised by ISF. The speaker was thanked with a round of applause.

A participant wanted to know how up to date the UPOV databases were as they depended on regular input from members. Mr. Button indicated that UPOV members were encouraged to submit their data on a regular basis. Currently, information on the date on which data had been provided was available in the form of a pdf document, however, in the future it was planned to have a new feature so that the date on which data had been provided would be indicated in the database.

7. Developments in the ISF Intellectual Property Committee

The Chairman gave the floor to the Chairman of the ISF Intellectual Property Committee (IPC), Mr. Stephen Smith who tackled a range of issues. He indicated that ISF member comments on PBR had been relayed to UPOV. During the last IPC meeting, the members had heard an update on the developments on the Community patent in the EU, and discussed information transparency on patents. They also heard updates on different initiatives to facilitate access to germplasm and to traits. An ISF survey on the implementation of the exemption for small farmers and on enforcement in the different countries had been finalized and would now be consolidated into action items.

M. Rapela of the Argentina Seed Association had presented an excellent presentation on the IP situation in South America, showing that in some countries the IP situation was fairly OK, but in other countries the developments were cause for concern. And last but not least, the IPC had also discussed its priorities leading to 2020 and beyond. The speaker was thanked with a round of applause.

Linked to this presentation a question was raised for Mr. P. Button of UPOV asking whether UPOV could do something to alleviate some of the opposition against IP in South America. Mr. P. Button replied that UPOV sought to explain the benefits of plant variety protection but it would not be appropriate for UPOV to intervene in individual UPOV members, unless invited to do so by the UPOV member concerned. He noted that it was

important for the breeders and farmers in the countries concerned to express their views.

The Chairman recalled that it was the farmers that benefit the most from the innovations in plant breeding and the seed industry. And from that standpoint it was important that ISF and its member associations maintain good relations with the respective farmer's organizations.

8. ESA patent database

The Chairman gave the floor to Szonja Csörgő of the European Seed Association (ESA) who presented the ESA Patent Database. She thanked ISF for the possibility to make this presentation. She recalled the ESA IP position that breeders need information on the patent status of individual plant varieties when starting a breeding program. And in case that information is not available it could lead to the fact that the breeder might not use that variety and this in turn would have an impact on innovation. ESA had committed itself to improve transparency and had created a Patent Database. This database is entirely based on the commitment and contribution of companies. It would be open to the public and accessible via the ESA website as of July 1, 2013. The database would allow breeders to check if the varieties included in the database are covered by patent applications or granted patents in Europe (as a start). In the future it was planned to expand this beyond EU. The speaker was thanked with a round of applause.

She did underline that in case a variety is not in the database, it did not mean that this variety would not fall under a patent. Currently around 700 varieties were in the database. A search by patent holder was currently not yet possible, and also there was no distinction yet between filed and granted patents but these aspects will be considered.

C. General Items

9. ISF Working Group on AP in Seed

The Chairman gave the floor to the Chairperson of the ISF WG AP in Seed, Ms Bernice Slutsky, who recalled that ISF had been following and providing input into a draft OECD document "Low level presence of transgenic plants in seed and grain commodities". This document had been drafted by the OECD Working Group on the Harmonization of Regulatory Oversight in Biotechnology.

The document deals with environmental risk/safety assessment and use of information in situations of low level presence (LLP) of unauthorized transgenic plants in seed and commodities. It stresses the importance of using the concept of "familiarity" when addressing LLP situations, and risk mitigation should be proportional to the risk. In the most recent meeting of the OECD Working Group in April 2013, the delegates found

consensus on the final version of the paper which is now cleared for submission to the OECD Joint Meeting for declassification and publication.

She added that the ISF WG in cooperation with the Breeders Committee had developed a draft position paper on Low Level Presence in Seed which encompassed a set of high level global principles. The document contained a definition of Low Level Presence, which was the same as for food/feed. The general considerations for LLP Policies should be science-based, practical and proactive. In addition, the ISF position paper was stating that a zero tolerance was not achievable. In view of the seed industry, LLP should be considered in the context of seed quality management systems and standards. National authorities should take into account quality management practices and standards, and Risk assessments may not always be necessary because of familiarity and/or low exposure.

The comment and amendment that had come in from UFS had been discussed before the congress. The comment on the OECD testing was not meant to encourage testing according to OECD criteria, but merely an educational reference as some regulators were not familiar with testing and quality standards. The amendment that was made on zero tolerance was in fact a good point, and after discussion it was felt that it would be good to draft a second, more technical paper that would address any particular situations that needed to be addressed.

The representative from the UFS indicated that after the preparatory discussions and having heard the explanations, he fully agreed with the proposed way forward and agreed to withdraw the comment and amendment. This meant that the original document was up for approval in the General Assembly.

The speaker was thanked with a round of applause.

A participant added that in ESA a similar exercise had just been finalized, and ESA would share their technical paper with ISF.

10. Any other business

There was no other business to discuss.

11. Closing the meeting

There being no other business to discuss, the Chairman thanked the speakers, and all participants for their active participation. A special thanks to the two Chairpersons of the IPC and SAC, Mr. Stephen Smith and Mrs Anke van den Hurk. All were warmly applauded. He further thanked the IPC and SAC members and the ISF Secretariat for its support and the colleagues in the BC for their direction to the SAC and IPC. He closed the meeting at 18.00 h.

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Report of the Open Meeting of the Trade and Arbitration Rules Committee

Held on Tuesday, 28 May 2013

Chairman: **Mr. Huib Ghijsen** (BE)

1. Call to order, antitrust statement and adoption of the agenda

The Chairman Mr. Huib Ghijsen called the meeting to order at 08.05 h and welcomed, according to the attendance list, 45 participants from the following 21 countries: Argentina, Australia, Austria, Belgium, Canada, Chile, China, China Taiwan, Denmark, Germany, Italy, Japan, Kenya, Republic of Korea, Netherlands, Poland, South Africa, Sweden, Turkey, United States, Uruguay; as well as ISF guests from APSA, SAA and ISTA.

There were no further comments to the anti-trust guidelines that were circulated with the program of the congress.

The Chairman asked the participants to indicate changes or additions to the agenda or to approve it as circulated. No modifications were proposed and the agenda was adopted.

2. Minutes of previous meeting (Rio Congress Report, pp. 11-13)

The minutes of the meeting held in Rio in 2012 had been approved by written procedure. There were no further comments.

3. The revision of Procedural Rules for Arbitration

The Chairman reported on the activities that the Committee has done since the 2012 congress. After having completed the ISF Rules for International Trade of Seed that were adopted in Rio de Janeiro on June 28, 2012, the TARC has focused its attention to a similar process on the Procedural Rules for Arbitration, the first round of revision and modernization had been completed in February 2013. A second round for discussion of the details has been planned for the next meeting of the Committee that will be held October in Warsaw (in conjunction with ESA Annual Meeting).

The TARC planned sending out the revised Procedural Rules to interested members in November 2013 already in order to get as many comments as possible; likely these will be discussed in meeting early February 2014, thus facilitating the last revision and fine tuning process. Outcome of that February meeting should be the version that will be submitted to the comments of ISF membership in March 2014 aiming at approval and adoption at the World seed Congress in Beijing.

4. The Incoterms©

Tomas Cullen was given the floor for his presentation on the importance of Incoterms©.

Incoterms®, set by the International Chamber of Commerce (ICC), were first introduced in 1936 and revised several times already. The last revision has been made in 2010 and is the one currently in use. Incoterms® have been developed to reflect the international commercial practices and to make clarity on what is included in the price of goods sold. The first version of these rules was focused on trade of commodities when delivered at the port at the ship side or on-board the ship. Incoterms® are tailored for application to transactions in both international (trans-boundary) and in-country or inside a free-trade region exchanges.

For a better adoption by trade, Incoterms® are organized in two groups: terms for any mode of transportation and for sea and waterway transportation.

Today trade has different needs: commodities, usually transported in bulk and by ocean freight, will most likely continue this way; manufactured goods that are loaded in containers require new terms adapted to modern commercial practices and logistic systems.

The three letter Incoterms® reflect most common business practices, variations are possible in different countries; the Incoterm® chosen will work at its best only if the parties specify the place of delivery becoming a part of the sales contract. One of the main purposes of the Incoterms® rules is to define the roles and responsibilities of the parties in relation to the contract of carriage. Incoterms® also include details about transport, for example the terms starting with “C” or “D” indicate that the seller is responsible of making a contract with the carrier, those starting with “E” or “F” assign this responsibility to the buyer. Attention has to be paid on the fact that carriers have limited liability for loss or damage of goods being transported; additional insurance to cover the value of shipment has to be bought by the parties, usually the seller arranges and pay for it and the buyer is the beneficiary.

Incoterms® clearly identify what to do in regards the division of costs and risks between the parties, traded goods clearance and carriage of them; similarly Incoterms® do not rule the transfer of property, the liability in case of unforeseeable events and consequences of contract breaches. The speaker recommended the parties to use the exact Incoterms® and to avoid obsolete terminology: for example CFR is the correct term but C&F, C+F are commonly used instead. Also, when shipping containers, correct terminology was recommended since there is still use of not appropriate terms like FOB and CIF. Incoterms® are grouped according to their target user: for all modes of transport (EXW, FCA, CPT, CIP, DAT, DAP and DDP); for sea and inland waterway (FAS, FOB, CFR and CIF). The speaker discussed in

detail the differences among each term according to place of delivery, to responsibility for carriage, to cost bearing and to delivery conditions. Special emphasis was placed on insurance since the liability of carriers is rather limited; the speaker strongly recommended the parties to buy appropriate insurance to cover the goods at least 110% of their contract value. The speaker called the attention on two critical aspects: the importance of defining the point of destination, as the costs to there are for the seller and those after are for the buyer; the obligations of the seller when adopting “D” terms since he will bear all related costs to place the goods at complete disposal of the buyer.

The Chairman and participants followed very attentively the presentation and congratulated with the speaker.

Several questions were asked from the audience. One of them was about when do seed change ownership, the answer was that Incoterms® do not state the transfer of property which should be indicated in the contract instead. Another question was about what are the Incoterms® more frequently used in international trade of seed; they were identified in CIF and FOB, the speaker recommended to change them to the new ones CIP and FCA respectively because the address better the new trade and transportation situations: CIF should be changed to CIP because CIF implies from port to port whilst CIP can be from any place to any place; the place of destination should be clearly mentioned in the contract; for CIF there are only 2 places, these are the port of loading and port of unloading. To another question it was answered that Incoterms® are often wrongly used as a frame to define a contract, they define some terms of the transportation; commercial terms should be agreed in the contract, Incoterms® will tell about the change of risk but not about the contract and sales conditions. Another question asked to clarify how the term ‘guaranteed to pass’ fit in Incoterms®; it was explained that in ISF Rules for Trade this term is related to Phytosanitary aspects and is not in the scope of Incoterms®.

5. Statistics on ISF Arbitration

The Secretariat provided an overview of ISF arbitration in the period June 2012 - May 2013. A table summarizing the status of ISF Arbitration Chambers (AC) and the arbitration requests filed was prepared; it indicated that there are 22 ISF AC, that 21 of them had replied to the survey, that 6 arbitration requests were submitted (5 international, 1 national) and that 1 dispute was concluded with conciliation and mediation.

Reasons for Arbitration: contract terms allegedly not respected, mislabeling and low germination, germination of seed-lots delivered, genetic purity.

Conciliation was reached in a case for genetic purity of seed-lot delivered.

Arbitration 1 (national): Company A (seller) supplied company B with seed of forage crops; after receiving the goods the buyer claimed low quality and absence of official certificates; payment was suspended in the aim to find agreement. During arbitration parties found an extrajudicial settlement.

Arbitration 2: Company A (breeder) had a licensing agreement with Company B (licensee) (applicant) for the complete product line in a given territory; after many years and when the agreement contract had expired, company A changed its structure, its distribution organization and countries of activity with the consequence that the license agreement did not match anymore; company B claimed to have rights on varieties and to have rights to continue selling. Extrajudicial agreement was found and arbitration request withdrawn.

Arbitration 3: Company A (applicant) sold seed to Company B; several lots of same variety of a field crop were shipped; company B claimed that once sown seed did germinate very poorly and that plant population was erratic because of this it hold part of payment; Company A had results of seed tests made before departure compliant with agreed standards, Company B did not have any germ test made after receiving of seed; shipment was transoceanic and crossed the equator; Company B did not participate to hearings; AC awarded in favor of applicant.

Arbitration 4: Company A (applicant) purchased from Company B vegetable seed; once seed was sold to distributors and planted by farmers complaints of varietal purity (mixture) were submitted to Company A. 2/3 of seed-lots received showed varietal purity problems at different percentage. Attempts to find agreement failed. Company A did not take samples upon arrival of seed received making difficult to counter results of seed test submitted by Company B, but field inspections were clearly indicating varietal mixture. AC ruled in favor of applicant but the award was on a sharing of responsibilities and consequently of the claimed amount.

Arbitration 5: Company A purchased from Company B (applicant) field crop seed. Upon arrival of goods a complaint about quality of packaging was made to seller; later-on buyer found that germination was below contracted one; payment of received goods was not made at due dates thus Company B reacted calling for contract fulfillment; since no payment was made Company B submitted arbitration. Before organization of Arbitration Tribunal companies found agreement and payment was done as per the contract. Arbitration request was withdrawn.

Arbitration 6: Company A (applicant) through a broker ordered to company B production of forage seed for following year sales. At the end of growing season, contracted quantity was not delivered as agreed; seed producer reported low germination issues and a request to renegotiate production price was made; applicant complained lack of information about production progress and alleged crop failure due to low germ; seed was never delivered to Company A that decided to apply for arbitration. This case was still open at the date of the congress.

Conciliation/mediation: the parties had contracted supply of forage seed at a given germination percent and quality standard; the seller claimed that these parameters were not met and did not proceed to ship seed. Buyer complained and asked for damages. Parties had found agreement at a first attempt for conciliation made by the relevant conciliator/mediator. Parties were not able to complete the agreement and have submitted arbitration request to the AC.

A participant asked for some additional explanation of comments on why most of arbitration involves vegetable or forage seed and not field crops when this latter segment represents by far the larger part of international seed trade. Answer was that one of the reasons could be that most of the contracts made are on trade of hybrid seed and that usually these contracts do not follow ISF Trade Rules but are intra-company agreement or more complex contracts involving long term relationship.

6. Working Projects of TARC

Central Arbitration Tribunal for appeal

The Chairman informed that the committee had discussed during the revision of the Procedural Rules the proposal to foresee only one central Arbitration Chamber for appeal, based in Switzerland and managed by the ISF Secretariat. The reasoning behind were: appeal courts have a higher standard or a higher expertise than lower courts; it would be beneficial for ISF appeal to be managed by one specialized AC chamber; a pool of international arbitrators for appeal could be organized; such solution should provide a more uniform management of appeal. The Committee will continue its work on this project.

From participants it was asked if costs were taken into consideration since it may be foreseeable that arbitrators' travel expenses and participation of parties to hearings might become very expensive, unless it has been foreseen to manage appeal only by videoconferencing. The answer given was that currently appeal take place in a country different from buyer and seller's thus requiring international travel for the parties; moreover parties may decide on this. The Chairman commented that one of the reasons was to give

higher importance to appeal and to avoid one AC judging the work of another AC; moreover appeal should not deal with the elements of the dispute but with the management of arbitration; it is very possible that there will be no need for hearings; also it had been proposed that no additional evidence could be allowed; if the system will be adopted, there will be no extra expenses and costs will be known upfront.

Guidelines for Handling Claims

The Chairman reminded that it had been proposed already to revise the document and publish it, but he commented that as the Committee progressed with the preparation for publication of the guidelines they did not draw much interest from ISF members. He added that some concerns were raised about the possible use and misuse of the contents according to who would be looking at them (if in favour or against the guidelines); it was said that it would be good having these guidelines simplified and made available to membership anyway.

Itinerant seminars or workshops

Since the adoption of the new version of ISF Rules for Trade in June 2012, the TARC had been discussing ideas for the promotion of the use of the Rules and for dissemination of a good knowledge of their contents. Survey and inquiries with ISF members concluded that the annual seed congress of the ISF was not the right place for organizing a dedicated session aimed at the promotion of Rules because delegates have very busy agendas. The idea of organizing some events like workshops or seminars closer to users was therefore discussed; Committee members proposed to test such project in the next Buenos Aires Seed Convention (Argentina, 11-12 November 2013) and based on that experience decide whether to continue with other similar initiatives, for example at APSA Congress or in conjunction with ESA Annual Meeting.

From the audience, the Australian representative commented that the idea was very good: his country always suffers because of great distances which prevent seed-men from participating. It was also asked whether it was planned the use of webinars or internet video conference; finally a training course on internet could be a good tool that would also allow self-scheduled attendance.

The representative of Kenya did also favourably comment the initiative and asked the Committee to evaluate a seminar to be held at the Seed Trade Association of Kenya (STAK) Congress already in September 2013.

7. Next meeting

The Committee will meet the 13 of October in Warsaw (in conjunction with ESA Annual Meeting) and 3-4 February 2014 in Southern France. The

next open session of the TARC will be during the 2014 ISF World Seed Congress in Beijing (China).

8. Composition of the Committee

The Chairman informed that few nominations were received and 2 new members were approved by the Board:

Ms Saskia Jurna, from the Dutch National Association Plantum, who was elected in fall 2012; she had participated already to the February meeting of TARC in Argentina. Her background will bring the expertise in seed business activities with a strong legal base.

Mr Michael Malin, of Desert Sun Marketing Co., nominated by the American Seed Trade Association (ASTA); Mr Malin is an expert in international trade and will bring useful contribution to the work of the TARC with his trading experience in the North American region.

The Chairman welcomed these 2 new members and participants applauded their election.

9. Any other business

a. UFS

The Chairman informed the participants that the French Seed Association UFS had chosen to organize the Arbitration Chamber directly in their structure. Until this decision, ISF arbitration was managed by an external organization with a services agreement. A newly hired person with education in law will be dedicated to managing and coordinating this AC.

The Chairman mentioned also that the UFS had translated the ISF Rules and Usages to French. The text has been submitted to the Secretariat and will be checked by the members of the TARC (who can read French) with the aim to give feedback to the translators and UFS. The French text will be made available for French speaking users. For clarity he reminded that according to the ISF rules the only official text is and will be the English one.

It was mentioned that a group of Spanish speaking countries did discuss a similar initiative for a text in Spanish.

b. Language

The Chairman mentioned that the TARC had also discussed adopting English as the official and sole language for arbitration and appeal; he said that it was still a very preliminary proposal but worth to mention and he asked for comments.

A participant suggested that English could be foreseen as the standard language but it should be remembered and allowed that parties may agree otherwise. Such an option was confirmed by the Chair and the Secretariat.

It was also said that appeal would be ideally in English due to the different level and to the specificities of such procedure.

10. Closing the meeting

There being no other business to discuss, the Chairman thanked the audience for their active contributions, the speaker for his presentation, the Secretariat for the preparation and organization and closed the meeting at 09.25 h.

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Report of the Open Meeting of the Phytosanitary Committee

Held on Tuesday, 28 May 2013

Chairman: **Mr. Roeland Kapsenberg** (US)

1. Call to order, antitrust statement and adoption of the agenda

The Chairman, Roeland Kapsenberg called the meeting to order at 10.30 h and welcomed 96 delegates from 30 countries (Argentina, Australia, Belgium, Brazil, Canada, Chile, China Taiwan, Czech Republic, Denmark, France, Germany, Greece, India, Italy, Japan, Kenya, South Korea, Lebanon, Netherlands, Poland, Serbia, South Africa, Sweden, Switzerland, Thailand, Turkey, Ukraine, UK, US and Uruguay) among whom were guests from regional seed associations such as APSA, ESA and SAA, and the international/intergovernmental organizations FAO, ISTA and OECD.

The ISF anti-trust guidelines were noted and the agenda adopted as presented.

2. Minutes of the Rio Meeting (Rio Congress Report, pp 14-16)

There were no comments or questions on the report of the meeting in Rio de Janeiro in 2012 that was already adopted in September 2012 through a written procedure.

Before moving to the next item of the agenda he acknowledged the help and cooperation of the Members of the Phytosanitary Committee during the course of the year.

3. Seed testing to fulfill phytosanitary requirements

Marcel Toonen started with the two main reasons why seed was tested; to minimise the risk of disease outbreaks that caused crop loss and had a negative environmental impact, and legislative requirements aimed at protecting agriculture and the environment. Of concern to governments were usually quarantine pests and there was zero tolerance for their presence in seed. Seed tests were used for diagnostic and detection purposes. Seed companies routinely tested hundreds of seed samples for detecting diseases while official bodies tended to test seed as a diagnostic tool to identify a possible disease or disorder.

Distinguishing between seed borne and seed transmissible pathogens was an important element of seed tests and this was done based on Koch's postulates enunciated in 1891 – detecting the pathogen, isolating it in its pure form and determining its pathogenicity. In recent times modifications had to be made to take into accounts organisms such as viruses, viroids and obligate fungi that cannot be cultured and nucleic-acid based methods. False-positive and false-negative results from a seed test had significant consequences for a seed company: a false-positive outcome could cause healthy lots to be discarded and result in financial losses, while a false negative outcome could end in infected lots being sold entailing an environmental risk and financial losses due to liability.

The choice of a seed health method depended on the probability of detecting a pathogen in seed and the confidence level, characteristics of the pathogen, the risk it could pose to the crop and the environment, and legal requirements. Key aspects of an ideal test were its ability to detect the relevant pathogen, in the right matrix (e.g. seed or leaves) and independently of any treatment applied to the seed. The method had to be sufficiently sensitive, reproducible and robust, determine the viability of the pathogen (dead or alive), rapid and relatively cost effective.

Using detection of *Clavibacter michiganensis* subsp. *michiganensis* (Cmm) in tomato seed, he gave examples of relatively recent developments in methodologies and the sensitivity of these new methods. Novel DNA/RNA based methods were being used more frequently in seed tests. They were specific to the pathogen, sensitive, rapid, and had a high throughput (i.e. many samples could be tested at a time). Many pathogens could be detected in the same sample (multiplex technologies) and they permitted quantification. Internal controls allowed verification of whether every step of the procedure worked as it should.

In conclusion he said there three important aspects that required mention: harmonization and standardization of tests for reliability and cost effectiveness; validation i.e. the quality of the test based on the performance of different parameters and, finally the viability of the pathogen, as dead pathogens still on the seed could not affect the crop. The last aspect was particularly relevant in the context of new nucleic acid based methods and legislative requirements, both of which currently did not distinguish between dead and alive pathogens detected on the seed.

He was asked if officials were being made aware of the importance of the biological relevance of the tests being used in detection of pathogens on seed. M Toonen replied there were two aspects to be taken into account, specificity of the test that was technology driven and the sensitivity of DNA

tests. It was the latter that was problematic and official bodies had not yet given it sufficient consideration. He was also asked if there was a process by which new methods gained acceptance across the world as a standard. He said there wasn't any process in place. Recognising the importance of harmonisation, the Netherlands Inspection Service for Horticulture (better known as Naktuinbouw) collaborated closely with ISHI whose methods were often adopted as ISTA Rules. It also worked closely with EPPO.

With respect to the example M Toonen had provided about Cmm isolates, he was asked why the DNA based method used to detect Cmm in tomato seed wasn't able to predict the pathogenicity of the different strains. M Toonen replied that only a small sequence coded for pathogenicity and it wasn't known precisely which sequence it was.

4. Industry view on indirect seed health tests

Radha Ranganathan informed the audience of the paper that the Phytosanitary Committee wished to present to ISF's General Assembly as an industry position. In accordance with ISF rules the paper was sent to all ISF Members six weeks before and ASTA had suggested some editorial changes. ASTA also made some comments in the form of questions or points for discussion that the group from ISHI-Veg drafting the paper had responded to. But before the changes proposed by ASTA were opened for discussion, she explained the context to the paper.

As explained by the previous speaker the characteristics of a good seed health test were specificity (to the target pathogen), sensitivity, reliability and reproducibility, validation using sound scientific methodology and publicly available. Technological innovations had led to the development of so-called indirect tests that could detect proteins (e.g. by Immuno-Fluorescence (IF) and DAS-ELISA) or nucleic acids (e.g. by PCR) specific to the target pathogen. Indirect tests were often very sensitive, rapid and could be performed by anyone with good general laboratory skills.

While the seed industry had embraced their use and thereby increased the quality of the seed available to the market place, there were considerations from the use of indirect tests that the paper drew attention to. The presence of viable pathogens was not demonstrated in an indirect test. Neither could it be excluded that related, non-pathogenic organisms were responsible for a positive test result. Specific pathological knowledge, like understanding of the variability in genetic material/ proteins in pathogenic and related non-pathogenic organisms, was essential for the correct interpretation of a test result.

The paper recommended that a positive result of an indirect test should be considered as

preliminary and should always be followed with a confirmatory test that was preferably a direct one based on isolation, detection and identification of the pathogen followed by confirmation of its viability and pathogenicity. Release of seed based solely on the results of an indirect test could be considered only if an adequate amount of research had shown the indirect test to perform as well or better than the direct test. As there were still no set standards for the depth and quality of the research in this area, it was advisable that companies erred on the side of caution and followed up a positive result from an indirect test with a confirmatory test, a direct or an indirect test based on different biological principles.

A second recommendation was that diagnostic protocols used for seed health testing as well as the seed test method validation data should be publicly available.

The editorial changes proposed by ASTA and the drafting group were agreed to by the audience clearing the way for the paper to be presented the following day to the General Assembly for adoption.

The Chairman took the floor to briefly thank the audience for its support for the paper and encouraged everyone, after its adoption as an ISF position, to use its contents in talks with national authorities about seed health tests.

5. New plant health regulation in the European Union

Gerard Meijerink explained that plant health was an area that was being reviewed under an umbrella programme of the European Union (EU) called Better Regulations. Plant health would no longer be a directive from the EU to its member states but a regulation, which meant that it would have direct validity and wouldn't require to be transposed into national law. The key features of the draft regulation were a pro-active approach to deal with new pests at and within the borders of the EU, and a modernized framework for intra-EU trade. Seed was just a small part of the regulation for plant health but its specificities were being well addressed. Of particular interest to the seed industry was that seed for planting and young plants for planting had been defined but the regulation currently was, however, not so clear about the distinction between professional and non-professional operators, and a final user (buying material for own use) was exempt from any phytosanitary obligations.

The regulation also defined different categories of pests. A listed quarantine pest was one not present in the EU or in limited areas, while a listed quality pest was present in the EU but posed a significant economic risk and therefore required regulation. The EU, however, was not using the term recommended by the IPPC for this category

of pests – Regulated Non-Quarantine Pests or RNQPs. Quarantine pests were further classified into two categories, those that were valid for the entire EU (union pests) and others (protected-zone pests) that were absent and were being regularly monitored in protected zones. Union pests included priority and non-priority pests. A zero tolerance was applied for all pests and derogations (for a non-zero tolerance) were to be provided on a case-by-case basis for union quality pests. The European Seed Association (ESA) would be doing its best to ensure a zero-tolerance approach was not applied to quality pests.

A new feature was the introduction of temporary measures for unidentified or newly emerging risks that the trade had limited experience of, say seed from a new country of origin entering the EU. Temporary measures could include physical checks of each lot (intensified sampling and testing), growing seed in a quarantine facility to verify absence of the pest, or prohibition of introduction of this material into the EU. Such measures could be applied for a period of 2 years, within which period the EU had to complete a risk assessment, but could be extended to a second period of 2 years.

Professional operators had to be registered but those exclusively supplying small quantities of plants or plant products to final users were exempted, as were transporters. ESA was, however, of the firm opinion that all markets for plant reproductive material, including niche ones, had to comply with a common set of rules. Any derogation from the quality requirements for seed had to be assessed only in the light of the threat it posed for health, traceability, quality, consumer protection and transparency.

G Meijerink spent the last few minutes giving additional information on phytosanitary and re-export certificates and additional declarations and concluded his presentation on the highlights of the EU's proposed plant health regulation by giving the time line for the revision and coming into force of the new law, expected to be sometime in 2016.

He was asked about how the regulation perceived the movement of small samples between companies and material from genebanks. G Meijerink said material coming from a gene bank would be considered an import for scientific purposes and professional operators would need an import permit and depending on the material being imported, the NPPO would specify the requirements that had to be met. He said he couldn't say just now how easy the procedure would be.

A member of the audience said he wished to express his view that no derogations for small quantities imported through the internet should be allowed. He also asked if ISF should not find a mechanism by which information about PRAs

could be shared. Many countries were asking for PRAs before seed could enter their markets. A PRA for tomato seed coming from France to enter Vietnam, for instance, often meant a PRA from some countries of production. This kind of work was not restricted to a company in one country. G Meijerink replied that this subject would be covered in the next presentation.

6. The making of an international standard on seed

The Chairman informed the audience of ISF's involvement in the development of an international standard (or International Standard on Phytosanitary Measures, ISPM) on the international movement of seed, which began in 1999 when it brought to the attention of national plant protection organisations (NPPO) the problems facing the industry with re-export. He said it was a unique opportunity for the industry to influence policy.

He outlined the various steps in preparing the standard with adoption by the Commission on Phytosanitary Measures, the governing body of the International Plant Protection Convention, in March/April 2016 if all went well. In March 2013 the Standards Committee of the IPPC established the Expert Working Group (EWG) charged with drafting the standard at a face to face meeting in July 2013. An ad hoc working group was set up in ISF to prepare for the EWG Meeting by identifying priority issues for the seed industry. These problems were described along with a proposed "solution" in a series of background and discussion papers. The 13 papers were mostly one-pagers and also addressed specific tasks set out for the EWG in the so-called specifications or terms of reference for the standard. These papers were also sent to the Phytosanitary Committee during their preparation for input and comments.

R Kapsenberg invited Gerard Meijerink, ISF's representative in the EWG, to briefly explain the different topics that ISF's ad hoc working group had identified as being important to the seed industry.

G Meijerink highlighted the main aspects of each paper starting with the first describing the international regulatory framework for seed as it exists today, to a Pest Risk Analysis (or PRA) targeted to seed, addressing the question of whether seed was a pest risk, seed-related pest management options, re-export certification, small quantities of R&D seed, and equivalency of phytosanitary measures and additional declarations.. He spoke of the technical annexes that ISF would like to see included in the standard and updated regularly. He concluded by saying that he didn't expect every aspect important to the seed industry to find a place in the standard. But often a solution proposed by ISF was already

found in other standards and if this was pointed out in the standard on seed, it would help in providing the necessary guidance to NPPOs on how to regulate seed.

After the presentation, R Ranganathan took a minute to explain that outreach to NPPOs on the standard was being restricted for the moment to members of the EWG, as the process of developing the standard was still in its early stages with only a few NPPOs being involved. In other words, only EWG members would be contacted by companies or the national association in the country concerned.

As the ISPM on seed was likely to be completed only in 2016, the question on what could be done by ISF to make information on PRAs already completed available to everyone concerned was repeated. The Chairman explained that the Committee was doing the maximum it could for the moment and the next presentation on pest lists would probably help in sharing information on PRAs.

7. ISF's Pest Lists

R Ranganathan reported on the status of the work being done on developing species specific seed related pest lists. This activity was an important supplement to the international standard on seed being developed by the IPPC.

The seed industry often found seed was considered a pest risk as it was assumed to be a pathway for the entry and establishment of many pests. A pest risk analyses (PRA) was the foundation for fact-based and proportionate phytosanitary regulations instituted by a country but in practice many countries did not have the resources to perform all the PRAs needed, neither in a reasonable period of time nor with the specificity required for seed for sowing.

The International Standard on Phytosanitary Measures (ISPM) 11 on PRA clearly spelt out the three stage process for determining the potential of seed being a pest risk:

1. Identification of an organism and pathway
2. Pest risk assessment, i.e. assessment of potential *introduction* and *spread*, and assessment of economic impacts
3. Pest risk management, i.e. identification of phytosanitary measures that (alone or in combination) reduce the risk of introduction and spread to an acceptable level

ISF's pest lists provided the information necessary for stages 1 and 3. The pest risk assessment in stage 2 was specific to a country or region.

Pathogenic organisms being regulated in 2011 by countries worldwide for pepper seed were categorised as:

- a. Seed a pathway for the entry or spread of the pest

- b. Seed not the pathway for the entry or spread of the pest
- c. Pest found as a contaminant of seed but pepper not a host
- d. Pepper *not* a host for the pest
- e. Inadequate evidence that seed is the pathway for the entry or spread of the pest

According to ISPM 11, only pests in categories 1 and 3 should be regulated if they are not present in the country and if their introduction could lead to significant economic damage. However, only 9 pests from a total of 93 fell into category 1. Seed was not considered to be the pathway for 41 pests and pepper was not a host for 31 pests.

Pest lists for 12 vegetable crops had been completed and a peer review was pending. The Steering Group was in the process of discussing policy related issues such as whether and when to go 'live' with the lists, management (updates, changes) of the pest lists, extending the effort to more species and under which conditions the pest lists could become part of the ISPM on seed.

8. Any other business

There was no other business raised.

9. Closing the meeting

The meeting closed at 12.30 h.

* * *

Report of the Meeting of the Vegetable and Ornamental Crop Section

Held on Tuesday, 28 May 2013

Chairman: **Mr. Anton van Doornmalen** (NL)

There were 139 persons from 29 countries who attended the meeting. The countries represented by members of the seed trade were: Argentina, Australia, Belgium, Brazil, Chile, China, China-Taiwan, Czech Republic, Denmark, France, Germany, Greece, Hungary, India, Israel, Italy, Japan, Kenya, South Korea, Netherlands, Poland, Romania, South Africa, Spain, Switzerland, Thailand, Turkey, United Kingdom and the United States.

1. Call to order, ISF anti-trust guidelines and adoption of the agenda

The Chairman Anton van Doornmalen called the meeting to order at 13.30 h and welcomed seed industry delegates and in particular guests from AFSTA, APSA, ESA, FAO, ISTA, OECD and UPOV. He especially welcomed the Dutch Ambassador to Greece and the Sr. Economic and Trade Advisor of the Embassy of the Netherlands. ISF's anti-trust statement was noted and the agenda adopted.

Before moving to the business of the day the Chairman spoke of the recently published book

“Salt Sugar Fat: How the Food Giants Hooked Us” by Michael Moss on the story of the rise of the processed food industry and its link to the emerging obesity epidemic. The book he said revealed how companies use salt, sugar, and fat to addict people. It was relevant to the vegetable seed industry as vegetables were a means by which one could fight obesity.

2. Minutes of the Rio Meeting (Rio Congress Report, pp 16-21)

There were no comments on the report of the last Section Meeting in Rio de Janeiro.

3. Election of Board Members

The Chairman informed the delegates of changes in the Vegetable and Ornamental Crop Section Board: he would be stepping down as Chairman after this meeting and his place was to be taken over by Vicente Navarro (Spain) whose nomination as Chairman was approved by ISF's General Assembly on 29 May 2013. There was one new nominee to the Board, Marco van Leeuwen (Netherlands) and 4 Board Members were being re-nominated by their national seed associations for another term of 2 years: Peter Dawson (UK), Matthew Kramer (US), Andreas Mueller (Germany) and Michael Piil (Denmark).

He thanked his colleagues in the Board for their support in the past year.

4. “Changing of the guard”: Reflections of the outgoing Chairman

Before sharing reflections of his 9 years as Chairman of the Board of ISF's Vegetable and Ornamental Crop Section, Anton van Doornmalen spoke of a report detailing the opportunities for market entry and business development in the Greek fruit and vegetable sector.

Developments in the Greek Horticultural Sector

The report was based on a special study on developments in the Greek horticultural sector conducted by the Netherlands Embassy in Greece together with Rigakis Seeds S.A. The main findings were available in a “market special” together with an extensive fact sheet of the sector (see www.agentschapnl.nl/nieuws/marktanalyse-griekse-tuinbouw).

The study's main finding was that domestic investors who had identified the potential of horticultural sector had invested in new large and modern projects that took advantage of the favorable climate conditions (in terms of reduced heating costs, fewer interventions to cultivation), the resulting superior quality of products and, not least, the various investment incentives provided by the administration. The financial crisis had not slowed the momentum and the fruit and vegetable sector had emerged as an attractive alternative

investment opportunity to the battered stock-exchange.

The agri-food chain was a dynamic sector and important both in terms of production and employment. Young professional Greeks had begun returning to the countryside and (Greek and foreign) investors in the Greek agricultural sector were in the search for investments in the necessary technology, innovation and logistics to strengthen the competitive edge of the sector.

Reflections of the outgoing Chairman

In his 9 years in the Board of the ISF's Vegetable and Ornamental Crop Section and many more years of involvement in the activities of branch organisations such as the Dutch and European seed associations and ISF, A van Doornmalen said he had had many occasions to ponder over the importance of the work done in these bodies and its relevance to professionals such as Managing Directors, Managers and specialists in seed companies. Was it worthwhile to spend time in boards, committees, working groups and other activities of the different branch organisations in the sector? How important was it to have a strong branch organisation or industry sector and should companies work to strengthen the sector as a whole?

These questions had found an answer in a study of 400 companies worldwide on the reasons why a company was more successful than another. The answer was surprising but on deeper reflection true: fifty per cent of the success of a company was attributed to the strength of the sector to which it belonged. So it was important to note that when a company was active in its branch organisation it was not only strengthening the sector, but that it also contributed up to 50% to its success. Looking back at his own experience of participating in association level activities for over 30 years, he said he recognised how much his engagement in association activities and the networking possibilities had helped him personally and his company to develop.

He concluded by thanking all the individuals and their companies in the various working groups in ISF who together had contributed to strengthening the federation: the Vegetable and Ornamental Crop Section Board, ISHI-Veg, Working Group (WG) on Disease Resistance and Terminology, WG AP GM Vegetables and its sub-groups on the Database and Stewardship, and the ad hoc WG on Pest Lists. He encouraged every company to give employees the opportunity to volunteer their time in association activities as it was an effective way to strengthen not only the branch but also the company's performance.

He wished Vicente all the best in his role as incoming Chairman of Vegetable and Ornamental Crop Section Board.

5. Looking ahead: Challenges facing the vegetable industry

Vicente Navarro re-iterated the point made by A van Doornmalen that the vegetable sector had demonstrated its strength in the last 10 years. A growing world population coupled with decreasing food production areas and rising consumer demands for more variety and nutritional benefits from vegetables had led the vegetable seed industry to successfully rethink traditional patterns. Over the last decade companies had adopted new technologies such as hybridization and protected culture, and had taken an increasingly global approach in serving the produce chain with ever better seed varieties.

However, in the coming 10 years he foresaw challenges facing the sector that was anew in the midst of change. Intellectual property issues, seed health and other aspects related to market access, stricter regulations regarding access and movement of germplasm as well as ongoing debates related to genetically modified organisms posed new challenges within the industry and considerable threats to the industry at large.

Looking ahead, the industry was facing external challenges that were not easy for a company, however big, to resolve alone. To meet these challenges, it was necessary to align industry viewpoints and collaborate with other stakeholders. Sustainable progress and food security depended largely on a smooth collaboration between governments, businesses and civil societies. V Navarro concluded in his presentation by saying that in his view a strong international industry association that helped align the industry's position on issues such as intellectual property and GM vegetables, raised awareness of the sector's work and lobbied for good operational and legal standards at national, regional and international levels was vital to the vegetable industry's long-term growth.

6. Doing business in China

Weihong Tian gave a presentation on doing business in China and began with statistics that demonstrated the decisive role agriculture played in the development of the national economy. Rice, maize and wheat had the largest share of the market with bean following in fourth place. It was estimated that 40,000 tons of vegetable seed (including sweet corn) with a market value of more than 10 billion RMB were needed per year. The market value of vegetable seed was forecast to grow to 15 billion RMB in 2019 due to an increase in acreage and a shift from open-pollinated crops to hybrids.

She then provided an explanation of the procedures for obtaining import permits, variety registration, plant variety protection and meeting quality standards. An import permit was

compulsory to import any seed and only Chinese seed companies with import and export business licenses could apply for an import permit. There were two steps for obtaining an import permit; approval from the provincial agriculture department and the Seed Administration Bureau of Ministry of Agriculture for seeds for trials (limited to a set quantity for each variety) and commercial seed (no limits on quantity but subject to variety registration), and a quarantine permit. With the exception of some specific crops in certain regions most vegetable seed did not require to be registered. China was a member of UPOV Act of 1978 and every company has to apply for variety protection before commercialization.

She concluded her presentation by speaking about the Catalogue for the Guidance of Foreign Investment Industries (amended in 2011) and the ways in which foreign companies could enter the Chinese seed market: through trading, by setting up joint venture (for vegetable seed there was no limit on the percentage of shares held by the joint venture partners) and by setting up a wholly foreign owned company (option open only for integrated companies with breeding, production and sales activities; obligatory to base its R&D facilities in China). She also noted that there was only one company that was wholly foreign owned and it had been set up before the new law came into force.

There were numerous questions from the audience reflecting the interest in doing business in China. With respect to setting up a joint venture for vegetable crops she was asked if there was a limit on the percentage of shares that must be held by the Chinese partner. W Tian said she had not find any document that set a specific percentage but that every joint venture had to get its approval renewed every year. She asked everyone interested in knowing more about the different topics covered in her talk to contact her.

7. Report of the Chairman of the Working Group Adventitious Presence GM Vegetable Seed on Stewardship

Franck Berger gave a report of the activities of the sub-group working on the second phase of the activities of the Working Group Adventitious Presence (AP) GM Vegetable Seed. This activity followed completion of first phase: creation of ISF's database of GM events. The database was for the sole purpose of providing information that facilitated developing quality assurance (QA) management procedures to minimize the risk of adventitious presence of third-party GM material in seed, and its functioning was demonstrated during the ISF Congress in 2012 in Rio.

Phase two activities began late in 2012 with the participation of 6 companies (HM.Clause, Mahyco, Monsanto, Nunhems, RijkZwaan and Syngenta) in

a sub-group, whose goal was to develop guidelines concerning the unintentional presence of genetically modified material in seed that could be incorporated into a company's Quality Management System. The considerations for adventitious or low level presence (terms used in the same sense as those developed by ISF's Working Group on AP in Seed) that the group would be taking into account were the global movement of vegetable seed (within a company and in the market as a whole), the stringency of stewardship practices (e.g. of a GM field trial), biology of the crop (strict self-pollinator vs. insect pollinator) and testing/detection.

After exploring different options, the sub-working group had decided to build on the expertise developed in field seeds through the Excellence Through Stewardship (ETS) program. But because of the highly fragmented market and differences in size and scope of companies in the vegetable sector, ETS would be complemented by a "tool box", which provided companies the means by which they could assess their likelihood of having been exposed to so-called 'direct' & 'indirect' sources of AP/LLP and risk management (stewardship) measures.

8. Protection of Elite Tomato Parents in a Changing Technology Landscape

David Francis made his presentation through a video conferencing facility. Introducing his talk he said implementing guidelines for handling disputes over the use of proprietary plant germplasm (as developed by ISF; see next section) required a balance between minimizing the likelihood of mistaken allegations of plagiarism and providing a disincentive for misuse of protected material. Such guidelines had to be based on biological data appropriate for the germplasm and also had to be consistent with standard practices within the breeding and seed industry.

Technology continued to change rapidly impacting methods and practical standards. Next-generation sequencing technology and highly-parallel SNP genotyping platforms had created an abundance of publically available informational markers for tomato. Large data sets were emerging that could help address existing variation, residual heterozygosity in parents, and sampling issues that affected the definition of minimum distances for distinctness and impacted uniformity and stability.

The SolCAP panel (a USDA/NIFA funded Solanaceae Coordinated Agricultural Project (SolCAP) tomato data set) consisted of 410 inbred varieties representing processing, field grown fresh-market, cherry, and vintage/landrace market classes. Cluster analysis showed that the inbred accessions represented seven sub-populations and further divisions were found within both the

contemporary processing and fresh market sub-populations. Thus standards for protection might differ for each "population" a finding also of the ISF study of "Daniella" and Cherry classes.

Parents of commercial hybrids and several hybrids were analysed for reproducibility of genotyping taking into account the source of seed, seed sampling, DNA preparation and the service provider. Heterozygosity in the SolCAP collection was shown to be in the range of 0.13% to 15%; 1.6% for processing, 1.2% for fresh-market and 3.2% for cherry type tomatoes. Extrapolating from the SolCAP data to the ISF study, he concluded that there was a potential for seed lot variation to exist (leading to larger order sampling issues), there was residual heterozygosity in breeding populations that new technology (e.g. doubled haploids) would eliminate (thereby impacting the standards) and that the proposed ISF standards did not appear to be consistent with breeding practices for SolCAP germplasm, as inbred parents would rarely meet the proposed standards.

Concluding his talk, he said in the ISF study there were several lines of inquiry needed in order to select the most appropriate similarity coefficient and clustering methodology, to gain a clear understanding of how both residual heterozygosity and sampling affected the match/mismatch identification and to develop explicit sampling guidelines. He also was of the view that the threshold might need to be flexible to balance mistaken allegations and protection.

He was asked by a member of the audience about what specifically prevented the use of the ISF guidelines and why a new analysis of the data was needed. D Francis replied that the technology used in the ISF study was appropriate but as it was likely to change, it was important to focus on *which* SNPs should be included rather than how they were detected. There was no new study required but he advocated putting bounds on the recommendations. The standards proposed were very stringent for permissible residual heterozygosity and therefore many parent lines would not meet these standards. Similarly, the threshold was very high and would not protect against misappropriation.

The Chairman asked if D Francis would be willing to be an advisor for the WG on Tomato Parent Identification. D Francis replied he was prepared to do so but that his definitive answer depended on ISF's expectation. The study ISF had conducted was rigorous but what was now needed was randomly resampling 384 SNPs at a time followed by an analysis of the results to estimate the statistical bounds on the standards and to understand their implications in case of misappropriation.

9. Report on the Tomato Parent Identification study

The Chairman gave a brief report on the status of the guidelines for handling a dispute over the use of a proprietary parent line in a tomato hybrid that D Francis had referred to in his presentation. Last year in Rio, the Section had approved the proposal of the Board to ask the Working Group to re-analyse the data for technical issues such as residual heterozygosity and the threshold (or coefficient of genetic similarity) and present its findings to tomato breeders for their consideration *before* the paper was presented again to the Section for adoption.

The working group along with tomato breeders had convened on conference calls to discuss the data, the results of the analysis and its outcome in the form of the threshold and guidelines on handling a dispute. The main problem identified was that to have a compelling case to prove infringement, the inbred in question should have no more than 1% of residual heterozygosity. But most commercial varieties had a residual heterozygosity greater than 1%. And as pointed out by D Francis, the question of how to deal with changes in technology (that would impact both the protocol to use to establish the threshold and the threshold itself) had to be addressed.

The guidelines were, thus, not going to be presented to the Section this year for adoption. To give the delegates the opportunity to understand the delicate balance between minimising the risk of mistaken claims and providing breeders with a practical tool to dissuade infringement, David Francis had been invited to make a presentation on protection of elite tomato parents in the face of changing technology.

10. Seed pathogens wanted: Dead or alive

In view of the growing demand from national plant protection offices to test seed and the development of sophisticated methods, Marcel Toonen spoke about the wide array of test methods available to determine the presence or absence of plant pathogens in seed, and the factors upon which the choice of method depended.

Plant pathogens had the potential to cause severe damage to food production systems and also to the environment. To prevent the outbreak of diseases healthy and reliable starting material was essential. Hygienic production systems and reliable seed testing methods were the basis for healthy sowing seeds. Seed was also tested because of legislative requirements. Classical methods focused on isolating the plant pathogen and confirming its pathogenicity. Modern methods based on the detection of specific DNA sequences were rapidly replacing these methods, as they

were rapid, becoming more reliable, more sensitive and required less taxonomic skills.

The choice of a seed health method depended on the characteristics of the pathogen, the risk it could pose to the crop and the environment, and legal requirements. The key aspects of an ideal test were its ability to detect the relevant pathogen, in the right matrix (e.g. seed or leaves) and independently of any seed treatment that may have been used. The method had to be sufficiently sensitive, reproducible and robust, be able to determine the viability of the pathogen and, last but not least, be rapid and relatively cost effective. He explained the importance of harmonisation of tests when used as a regulatory tool and the relevance of test validation. He gave examples of developments in methodologies in recent years and sensitivity of methods using the detection of *Clavibacter michiganensis* subsp. *michiganensis* and pospiviroids on tomato seed, respectively.

In closing his presentation, he said seed health testing reduced the risk of contaminated seed lots. Currently, a determination of whether a pathogen was dead or alive was not made, as legislators didn't make that distinction for quarantine pests and imposed a zero-tolerance for the presence of the pathogen in seed. Validation of protocols, in his view, was going to become more and more important as was harmonization of tests. Lastly, the use of biological relevant thresholds was critical as with sensitive methods one could detect traces of DNA from infected seed lots produced some time ago. A 'sensible' threshold was required so as to be able to distinguish a healthy seed lot from an infected one.

11. Food for thought on access to genetic resources and benefit sharing

Tonny van den Boom made a presentation on access to genetic resources with a view to raising awareness in the vegetable industry on the implications of the Nagoya Protocol to the Convention on Biological Diversity (CBD), which she expected would come into force sometime soon in the future.

She gave a brief explanation of the goals of the CBD (conservation, sustainable use, and access and benefit sharing based on prior informed consent (PIC) and mutually agreed terms (MAT)) and the Nagoya Protocol (ensure compliance with the obligations of access and benefit sharing in accordance with the CBD). The Nagoya Protocol required the users of genetic resources to demonstrate they had complied with the requirements of PIC and MAT; source(s) of genetic resources had to be revealed when applying for intellectual property rights or variety registration and non-compliance could result in being penalised.

In practice plant breeders used commercial varieties (acquired under the breeders' exemption), germplasm from *ex situ* collections (based on a material transfer agreement) and *in situ* material such as wild relatives, which since the implementation in 1994 of the CBD had become difficult to access. There were benefit-sharing mechanisms also in place. Under the breeders' exemption, material was available for further research and development by others and companies provided information and assistance (in kind or financial) to the genebanks that provided them with material.

She gave practical examples of the difficulties her company had faced in working with national focal points responsible for providing access to genetic resources in their collections. In addition to practical issues of language and not responding to e-mails, the application for prior informed consent was rarely handled in a timely manner and, where the point of discussing mutual agreed terms could be reached, expectations on the benefit sharing were often unrealistic or conditions entailed a high administrative burden.

A member of the audience asked if there was any effort by the industry to lobby the European Union about its ratification of the Nagoya Protocol. A presentation made the previous day by a representative of the European Commission had given the impression that implementation of the Nagoya Protocol would put the companies in a very difficult position. He was informed of the work being done by national seed associations in the European Union, the regional association ESA and ISF. T van den Boom was asked if access even to commercial varieties would require prior informed consent under the Nagoya Protocol. She replied this was how she had understood the situation but what wasn't clear was what would be accepted as a certificate of compliance.

12. Any other business

Ko Remijnse took the floor on behalf of the vegetable sector and the seed industry as a whole to say a few words of thanks to A van Doornmalen for his contribution to ISF.

He spoke of the true seedsman that Anton was. He started his career about 40 years ago as a salesman for RijkZwaan and in 1987 he became Chairman of the Board of the company, a position he held till 2009. In the 1980s he began his engagement with the national and regional associations, and ISF. His first activity for ISF was as Chairman of the National Organising Committee responsible for the ISF Congress in Amsterdam in 1996 where he surprised everyone with his songs and guitar. Twelve years ago he became a member of ISF's Vegetable and Ornamental Crop Section Board and took the position of Chairman 3 years later.

Anton, he continued, was a versatile man – a promoter, an industry representative par excellence, a mediator, a troubadour and much more. Just as he had begun the meeting today with a few words on the importance of vegetables to human health, he had promoted the same message for many years at almost every meeting he attended. As an industry representative he was more than just a director of RijkZwaan; he was a pioneer in advocating the common interests of the industry in a sympathetic and simple manner, and always with a smile. He never lost track of RijkZwaan's interests but he never put it ahead of the common good. He was never confrontational but the one who always tried to mediate when there were differences of opinions. His efforts were often met with success. Lastly, a troubadour that the industry first encountered during the 1996 Congress and frequently thereafter; on a boat in Stockholm singing together with his Italian supplier, at Bernard Le Buanec's farewell party and at Wim Nijssen's party last week. He thanked Anton for his leadership as Chairman of the Vegetable and Ornamental Crop Section Board.

He wished Riekie, Anton's wife, who always accompanied him for the ISF Congresses but was not in Athens, a rapid recovery. Concluding his speech, he reminded the audience that this was not goodbye, as Anton was going to continue to participate in selected ISF activities.

A v Doornmalen said he was touched by the kind words and could only respond by singing a song but after closing the meeting.

13. Closing the meeting

The meeting closed at 17.45 h.

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Report of the Meeting of the Forage and Turf Crop Section

Held on Wednesday, 29 May 2013

Chairman: **Mr. John Gilbert** (UK)

1. Call to order, antitrust guidelines and adoption of the agenda

The Chairman called the meeting to order at 08:00 h and welcomed, according to the attendance list, 73 participants from the following 27 countries: Argentina, Australia, Belgium, Brazil, Canada, Chile, China Taiwan, Czech Republic, Denmark, France, Germany, Greece, Italy, Japan, Kenya, Republic of Korea, Netherlands, New Zealand, Poland, Slovenia, South Africa, Spain, Sweden, Turkey, United Kingdom, United States, Uruguay; as well as ISF guests from APSA, ESA, SAA and ISTA, UPOV. There were apologies from Section Board member John McKenzie.

There were no further comments to the anti-trust guidelines. The draft agenda was adopted unchanged.

2. Minutes of the Rio Meeting (Rio Congress Report, pp 26-28)

The Rio minutes had been approved by written procedure. There were no further comments to these minutes.

3. Election of Section Board Members (13.076)

The Chairman proposed the (re-)election of the Section Board members that had been announced in circular 13.076, which had been sent out to all ISF members with the congress documents, 6 weeks in advance of the congress. The following persons were up for (re-election: Adger Banken (NL); Jiri Barta (CZ) and Paul Frey (US). The Section approved these nominations unanimously through a round of applause.

4. UPOV: PBR statistics of forage and turf crops and impact of UPOV membership

The Chairman gave the floor to Mr. Peter Button, Vice Secretary-General of UPOV, who presented "PBR Statistics in Forage and Turf Crops and the Impact of UPOV membership".

PBR statistics in Forage and Turf Crops

Based on the presentation available at the Secretariat on request, the following is an ISF summary. Mr. Button had looked at 20 species and genera and analysed the data available in the PLUTO database of UPOV. These species were in fact the same species of which ISF was collecting seed trade data, with the addition of wheat and *Urochloa*. Initially, upon proposal of ISF, he had tried to find out which percentage of varieties on the market was enjoying plant breeders rights, by cross referencing with national listing data. However, this proved too difficult as not all countries had a national list, or no such data were available. So in his analyses he had focussed on PBR data only. The statistics showed that in the last 10 years Pea had the highest numbers of PBR applications (848) in 33 UPOV members, followed by *Lolium perenne* with 751 applications in 21 countries and *L. multiflorum* with 209 applications in 18 countries. As a reference he had added wheat, where 3300 applications had been filed in 41 countries. He then showed the statistics per crop broken down per country. In a lot of crops there was an emphasis on PBR applications in the EU, with the exception of tall fescue and Kentucky bluegrass where the highest number of PBR applications was in the US. The tropical grass species *Urochloa* showed the highest number of PBR applications in Australia, followed by Mexico and Brazil. He then paused here for questions.

One comment was made that such an overview of PBR applications was an excellent indicator for

breeding activity in the different crops, as one could expect that most applications would be done in the country of breeding. The high numbers of PBR applications in Russia were astonishing and underlined the need for more Russian involvement in ISF. The ISF Secretary-General encouraged all participants to reach out to their Russian contacts for this. In contrast, the absence of PBR applications from the Asian and African continents in these crop sectors was clearly visible.

Impact of UPOV membership

P. Button then continued with the 2nd part on the impact of UPOV membership in a country. He based himself on reports of studies conducted in various individual countries: Argentina, Canada, China, Kenya, Poland and the Republic of Korea. The analyses showed that the impacts of PBR can be direct, but also indirect, in that having legislation in place creates an environment conducive to a) investment in plant breeding; b) access to foreign trade in varieties and c) increased availability to more improved varieties.

Many changes could be noted in a country after introduction of UPOV legislation:

- An increase in individual breeders and seed companies (& other organizations involved in the seed industry).
- The acreages in certain crops had increased tremendously.
- Sometimes it even led to the fact that multinational companies located their worldwide breeding centres for a certain crop to the country where PBR legislation had been introduced.
- More investment in plant breeding.
- An increase in the proportion of certified seed arising from new protected varieties.
- Significant increases in crop yields were reported, e.g. peas (32%), canola (25%) and wheat (22%) and also increased disease resistance and drought tolerance.
- Cash receipts increased.
- More plant varieties were registered for sale.
- Growers had access to a much wider selection of varieties.
- Expansion of the seed industry in certain crops could largely be attributed to increased access to foreign varieties since PBR introduction.
- After the Republic of Korea became a UPOV member, there was a large increase in the number of applications by non-residents, which meant that resident breeders had access to new germplasm. Subsequently, the PBR application ratio of Residents vs. Non Residents after a number of years increased in favour of residents.

- Net exports increased with triple digit figures for certain crops.
- Countries changed from being a net importer, to a net exporter within 10 years after introduction of UPOV.
- Increase in foreign collaborations & partnerships.

The Chairman thanked the speaker for his contribution and he was warmly applauded.

The Secretariat recalled that this 2nd part of the presentation had been scheduled because Greece was not yet a member of UPOV. It was hoped that by seeing the impact of UPOV membership on the plant breeding and seed industry in a country, the Greek authorities would speed up the process to become a UPOV member.

5. Breeders Trust on enforcement of PBR in grass seed

The Chairman gave the floor to Corné van Beers, of the organization Breeders Trust. This organization consisted of 9 shareholders, all European seed potato breeders and 7 members, all European grass seed breeders. As its mission, Breeders Trust wished to contribute to a fair production, processing and trading of plant propagation material in a level playing field for everyone.

Breeders Trust activities are to raise awareness through exhibitions, information meetings and to appear in the press. They also initiate actions against PBR infringements; initiate actions against illegal production/trading, start up proceedings if necessary and set examples to discourage the lawbreakers. By doing so, BT unburdens its shareholders/members.

He emphasized that piracy and infringement of PBR is a criminal act, and that piracy and violation of IP rights leads to a) a disturbance of the market; b) a lower turnover for the plant breeder (loss in license fee) c) damage to the image of a company (loss of exclusivity) and d) infringements, piracy and illegalities are also often in conflict with phytosanitary regulations. Every member of Breeders Trust could come up with a case, but the Technical Council would decide on the basis of a number of criteria, such as if there is a benefit of the whole group, if there is enough information and if there is enough chance to win the case.

The procedure was to receive tips from local agents or area managers, followed by investigation and collecting evidence and negotiation with the involved company or their law firm. It would be attempted to reach a friendly settlement through a legal procedure, but in case this was not possible, the case would be brought to court. Where necessary a press release would follow and others would be discouraged by naming and shaming.

He then provided information on some cases in potatoes in Germany, Denmark, Netherlands and Belgium, and also on some case in grasses in Portugal, Bulgaria and Italy.

The speaker was thanked with a round of applause.

In response to a question, he added that electrophoresis tests were used in grasses as a quick scan to assess whether it was the variety in question or not. If yes, the sample would go forward into a more detailed grow out analysis in the field.

6. Update on ISTA matters

The Chairman gave the floor to Mrs. Grethe Tarp, member of the Executive Committee of the International Seed Testing Association (ISTA).

With regards to the status on the ISTA/ISF experiment on large herbage seed lots she mentioned that 27 company plants had participated, of which 23 had met the requirements for the experiment. Of the 181 large seed-lots that had been tested for heterogeneity, 163 were sufficiently homogeneous. The Experiment would end on 30 June 2013, after which the ISTA Rules to produce large herbage seed-lots would become effective from 1 July 2013. She also updated the participants on the possibility for multiple original OIC for partial seed-lots, whereby each sub-lot must represent at least 20% of the weight of the original seed lot. From last year's ISTA meeting it was also possible to end a germination test at a predetermined level. Only the category 'Normal Seedlings' would have to be reported, and other categories would be reported as "N". ISTA had made several changes to its constitution to make it officially a 'Not-for-Profit Association' under Swiss Law. She also went over the new ISTA Rules proposals, among others on shortening the germination test for four *Festuca* sp.; three *Lolium* sp. and three *Poa* sp. The ISTA Strategy for 2013-2016 was laid out and she was glad to report that ISTA had a new Secretary-General: Mr. Benjamin Kaufman who would start on the 1st of July 2013. The speaker was thanked with a round of applause.

7. Any other business

The Chairman recalled that in the last Section Board meeting it had been decided to reach out to the EU Commission that a 5 year threshold to declare a field 'permanent grassland' was way too short, and ISF had written letters to 5 EU Commissioners. He invited Mr. Gert van Straalen to the stage to provide a recent update on the legislative proposal. Mr. van Straalen indicated that the proposal was still being discussed but in the coming 2 months there would be more clarity. Unfortunately the outcome is still unpredictable.

8. Closing the meeting

There being no other business to report, the Chairman thanked all the speakers and the audience for their active contributions and closed the meeting at 09.30 h.

Report of the Meeting of the Field Crop Section

Held on Wednesday, 28 May 2013

Chairman: **Mr. Bryan Gerard** (US)

1. Call to order, antitrust statement, adoption of the agenda

The Chairman called the meeting to order at 10.30 h and welcomed all 121 participants from the following 31 countries: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, China Taiwan, Czech Republic, Denmark, France, Germany, Greece, Hungary, India, Italy, Kenya, Republic of Korea, Netherlands, Paraguay, Poland, Serbia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, United States, Uruguay; as well as ISF guests from APSA, ESA, SAA and FAO, ISTA, OECD, UPOV.

There were no further comments to the anti-trust guidelines. The draft agenda was adopted unchanged.

2. Minutes of the Rio Meeting (Rio Congress Report, pp 21-25)

There were no comments on the report of the previous Section meeting held in Rio in 2013.

3. Election of Section Board Members (13.077-a)

The Chairman asked the 3 vice chairmen to join him at the main table: Archie Wilson, from Canada, responsible of cereals crops, Pablo Bergada (Argentina) for maize and sorghum and Peter Angenendt (Germany) covering industrial crops. There was one new nominee to the Board, Dave Sippell (USA) and 8 Board Members were being re-nominated by their national seed associations for another term of 2 years: Pablo Bergada and Gerardo Bartolomé (Argentina), Alvaro Eyzaguirre (Chile), Eugenio Gonzalez (Spain), Jean-Paul Krattiger (Switzerland), Karol Marciniak (Poland), Claude Tabel (France) and Yusuf Yormazoglu (Turkey).

4. The Field Crops and Seed Industry in Greece

Mr Athanasios Tsoutsas, Board Member of Greek Seeds Trade Association EEPES, was invited to take the floor and provide the meeting with information and details about agriculture in Greece. After an introduction of the geography of Greece and the basic information on surface,

population, administrative organization, and coastline, the speaker explained that the main business activities in the country are represented 73% by services, industries and construction cover approx. 20% and agriculture only 3.5%. Traditionally the agricultural sector in Greece played an important role to the economy of the country targeting to both self-sufficiency and exportation; it covers 2.9 million hectares. A favourable climate supports the production of a wide range of high quality products especially vegetables, fruits and trees: very well-known is the olive oil. Farmers are more than 500.000; the average farm size is 4.3 ha, only 4.3% of holdings are larger than 20 hectares. Young generations are returning to agriculture, pushed by the crisis and securing a future to this primary activity. In the last 5 years, the role of agriculture has increased: the output has progressed from 4.4% of GDP to 5.5%, employment has grown from 8.6% to 11.6% of total.

On the 2.9 million hectares of cultivated land cereals cover the largest acreage with 32%, cotton and other fiber are second with 10%, vegetables 4% and biofuels (mainly sunflower) reached 3%. For the 917,816 hectares of cereals, 44% is durum wheat, 20% maize, 15% common wheat, 11% barley and 4% rice (grown in the central-north area of Thessaloniki). Around 120 companies represent the seed industry of Greece, they produce and sell seed domestically and abroad; a large number of nurseries in vegetables and in ornamental plants produce seedlings for specialized growers; sales to end users are made by more than 2,000 retail shops as a consequence of the fragmentation of farms and the orography of the country.

Greece is not yet a member of UPOV: since many years there is an on-going process at Ministry level but it did not succeed yet; as an EU Member Country, Greece is subject to the EU Regulation 2100/94 on Community plant variety rights and provides protection to breeders on that base. Anyway, farm saved seed is broadly used in the country: more than 80% in common wheat and barley, close to 70% for potato and alfalfa, 60% in durum wheat and 45% for rice. The National Seed Association of Greece has been working hard at government level to obtain rules aimed at promotion and support of the use of certified seed. In 2001, Greece has issued a Country Decision concerning 5 crops (cotton, maize, soybean, oil-seed rape and sugar beet) stating that "no presence" of GM events shall be found in seed with the exception of maize where AP is tolerated at the level of 0,5% for existing and registered events.

The speaker concluded his presentation saying that the variety of environmental conditions, the willingness of farmers to adopt modern technologies and their experience growing many

crops put Greece in an ideal position for production of high quality seed of a broad variety of species. Other advantages are a long history of seed production, which has created a “seed production mentality”, know-how in breeding and seeds maintenance, low GM AP risk and the support of the local Research Institute (ETHIAGE) which provides multi-material resources.

The Chairman thanked Mr. Tsoutsas for his presentation and opened the floor to questions. To the question what could be the top couple of challenges for the Greek seed industry in the 5 years to come, the speaker answered that farm saved seed in his opinion was one of the main issues; the close cooperation with the national authorities was indicated as a way to solve these challenges and the participation of the Greek agriculture Minister to the Opening Ceremony of the Congress was seen as a very good sign of change.

Another participant asked for more details about the threshold of 0.5% that was reported as set for maize; the answer was that this limit is set for maize seed intended for planting and that the event should be registered in Europe for cultivation.

One more request was to know more about testing 100% of seed lots when importing parent seed, what sampling and testing protocols were adopted. The answer was that ISTA protocols are followed, 3000 seeds are the sample size and one of the 5 national accredited labs performs the test on that sample.

Another participant asked to know why Greece is not member of UPOV yet while it follows the EU Regulation on plant varieties and why the level of farm saved seed in durum wheat is below 60% and soft wheat above 80%. Mr. Tsoutsas replied that for UPOV it is matter of time, as far as the level of farm saved seed it is lower for durum because there is a national legislation requiring the use of certified seed for a farmer to be eligible for additional premium on price whilst such a provision does not exist on soft.

5. Improving agricultural productivity to sustainably meet the demands of a growing world

The Chairman invited to take the floor Mrs Margaret Ziegler, Executive Director of the Global Harvest Initiative (GHI), a private-sector non-profit organization focused on advancing policies for productivity growth throughout the agricultural value chain to address hunger, nutrition and food security challenges. Mrs Zeigler reported that over the last 18-20 years an increasing collaboration of the private sector with international agencies and organisations was observed, in particular the seed industry was found at the front line to really improve agriculture productivity. Among the

challenges of today's agriculture she listed the request to produce food for a world population projected to grow by 3 billion people by year 2050, the increasing demand for more proteins and the changes in climate generating progressively more severe events that impact production and logistics and cause tougher competition for natural resources. Agriculture has been able to stand these challenges and keep the productivity at the level that had been projected as needed to address world food demand until today. The Total Factor Productivity ratio, a tool developed to measure the performance of agriculture, showed that starting from 1980 agricultural outputs have progressively increased in spite of a reduction of farming inputs especially land use and irrigation. The opinion is that the TFP growth was due to innovation in science and knowledge extension and to better management and production practices. But it should be noted that TFP has not evolved uniformly: it has had a minimal progression in Sub-Saharan African countries (0.5% per year) and a very positive progression in South America (2.74% per year). The speaker considered that productivity can be improved by several different policies, for example removing barriers to global and regional trade in agriculture, improving agricultural research & development and knowledge exchange, increasing investment in agricultural development and rural infrastructure, improving agronomic practices and delivering improved genetic seed material. Investment in R&D is key to productivity growth and should be done by both public and private sectors. Public research usually covers several crops, focuses on basic-foundation technology, completes the pipeline supports next generation of scientists and can build national systems aimed to adapt international research to local conditions; conversely private research is focused on a limited number of selected crops and tends to be concentrated in developed countries. To emphasize this concept the speaker compared the situation in the USA with that in China: the US growth of TFP has averaged 1.5% since 1980's seemingly consequence of reduction of investments in agriculture R&D; China having increased investments in R&D from 4-5% to 10% per year has experienced a progression of TFP of about 2.83%. Strengthening and increasing funding for the international organizations like the CGIAR Centers is another possible tool for the creation of next generation technologies for climate resilience and crop productivity and new systems of knowledge exchange and extension services. Finally harmonization of regulations must incorporate risk assessment and levels of protection for sanitary and phytosanitary issues and protect intellectual property for seed. Ms. Zeigler concluded stating that investment in R&D and extension services is critical; strong measures

to preserve intellectual property rights are needed; the policy environment must be good enough to enable productivity growth; collaboration among governments, NGO's and private sector is a way to forge solutions.

The Chairman thanked M. Zeigler for her presentation and asked to what in her opinion the increased Total Factor Productivity could be attributed. The answer was that countries had to respond to market demand, and for that were assisted by national agriculture research centers that had developed R&D programs focused on the region, by the availability of better information and by access to better quality material.

A participant asked the speaker's opinion about the developments in European agriculture aimed at making it "greener"; having a less intensive agriculture, favoring set aside of land could be considered a European underachievement of the TFP target. The reply was that intensification should be the world target but if some regions prefer to act differently that should be accepted because conservation agriculture could be seen as part of an intensification system. It was important that developing countries adopted existing modern technologies in all sectors as tools to produce higher yields.

The representative of the FAO commented that seed policies had been one of the objectives of the Organization, sustainable production intensification had been a strategic objective; he added that the presentation put a lot of emphasis on varieties development but still the system to get those improved varieties to farmers is the seed companies and this aspect should not be neglected but receive a attention in the international programs.

6. Breeders remuneration – Panel discussion

The Chairman reminded that under the leadership of Christoph Amberger the Field Crops Section had a Working Group dedicated to study Royalty Collection Systems in different world countries; Frank Curtiss who had chaired that WG and completed his mandate with the preparation of the study report received a special thank for this achievement. The Study had generated many interesting learning and for this reason a discussion panel had been organized for this meeting. Mr Amberger was invited by the Chairman to take the floor and act as the moderator of the discussion about the insights of royalty collection systems. The panel was composed by Malin Nilsson (Sweden), Patty Townsend (Canada) and Diego Risso (Uruguay). Each panellist had prepared a short presentation with highlights of their world region.

In the European Union only 17 member states currently have a system in place for collecting royalties, the number of crops enclosed in the

systems differs a lot between countries: in France only wheat is covered, at the opposite in Sweden all crops for which farmers are allowed to save seed are included. Systems are typically based on the seed used except France that had an end point royalty collection system; the study, based on 7 of the EU countries, concluded that the efficiency ranged from 20 to 94 per cent. In the Swedish system the collection of remuneration is carried out by the Swedish Seed Association for its members and covers all varieties that are protected by the EU system; annual negotiations with farmers' unions determine the level of royalties to be collected; most recent negotiations agreed that the level should be 70% of what was paid on certified seed; the agreement included a list of the varieties covered and was published in the EU Journal. After the agreement was finalized the Swedish Board of Agriculture supplied a list of all farmers to the Seed Association that had sent to each a declaration form where to provide information on their use of farm saved seed by variety; also processors have been obliged to declare the quantities and varieties of saved seed that they had cleaned for farmers' use. The users of FSS were invoiced by the Swedish National Association; the Association collected the money and distributed it to the breeders owning the varieties.

In North America, the United States does not have a system to collect royalties on farm saved seed. In Canada the story is slightly different but still remains immature; in 2008 the investment in plant breeding has reached 160 million dollars 35% of which by the private sector concentrated in 3 crops: corn, canola and soybeans; private are very reluctant to invest in wheat because the return on investment is low, the overall cost prohibitive. As far as intellectual property, Canada has not a competitive protection system; until now Canada has been following UPOV convention 78 and has experienced a very high level of farm saved seed; the efficiency of the system for wheat had been calculated at 20%; the use of certified seed in Canada was estimated at 97% for canola, 98% for corn, soybeans are at 77%, oats at 12% and western wheat at 19% (this meant that 81% of wheat seed sown is FSS). A consequence of all this was that Canada is low in terms of productivity gain; to change the *status quo* private sector should have an increasing role, variety registration should follow more flexible system; it was anticipated that the country should comply with UPOV 99 in fall 2013. Another favourable finding was that 20% of farmers who grow 80% of crops declared they wanted new innovative varieties, said they knew that they have a role to play and should contribute to financing of innovation.

In South America Argentina and Uruguay have developed value capture systems aimed at collecting royalties through the licence signed

between breeders and licence holders. The two countries had similar environments on intellectual property legal framework, and had similar ways of cropping, seed companies were quite the same. Uruguay and Argentina plant breeders' associations have developed systems for a licence between breeder and holder; on farm saved seed they had slightly different mechanisms in place. The differences are in the way information is circulated: Argentina publishes in the media terms and conditions how the varieties will be sold, whilst in Uruguay this is achieved through bilateral contracts with every farmer this was possible because Uruguay had only 3500 farmers compared to more than 50000 in Argentina, suitable software and strong database are key tools to manage the systems. Obstacles to a successful story were among others the lack of commitment of other stakeholders, the interference of government in contracts between parties and a weak regulatory framework. The speaker said that results should not be measured only by amount royalties collected but by the change of culture/mentality. Thinking at long term is more important than looking at short term.

The moderator thanked the three speakers and opened the discussion asking the panellists to say what was the thing they likes most and what they would had changed. The answers were that for Sweden the best aspect was the agreement between the unions and for what was to be improved it was crucial to have government support (for example: access to farmers addresses, obtain that a declaration of use of FSS becomes obligatory and to foresee no difference between varieties protected under EU and national laws).

For North America the panellist indicated immediately as best aspect the governmental support. In South America, it was pointed out the excellent cooperation between breeders coordinated by the National Seed Association ASA; at the opposite it was mentioned that support from the government should be improved. In Uruguay what seemingly was the best aspect was the interaction between breeders and government about enforcement of intellectual property and the communication with farmers; what could be improved was the information once the seed goes through the distribution channel.

From the floor, a participant commented that what was a negative aspect in UK and EU was a lack of audits that could help assessing royalties; a change in culture was wished.

Another participant added that it was very encouraging to hear the progress in royalty collection in all regions because this is important for the sustainability of genetic improvement and to make sure that value capture comes back to breeders and asked to panellists where in their

opinion were the major obstacles in getting positive developments. The answers were that Argentina and Uruguay interaction between patents and PVP had indicated the need to create innovative systems that can manage both aspects and compensate breeders and technology developers; for Canada the biggest challenge was the culture change and the need to have mostly the farmers on the side of seed breeders; the seed industry through the Canadian Seed Association had been very active helping producing the new legislation. In Europe a lot of countries do not have in place collection systems for FSS; there is a very heterogeneous situation that would be simplified if all countries would adhere to UPOV 91 and develop clear and harmonized rules on use on FSS.

A participant asked the panel what in its opinion comes first: breeders convincing regulators that something need to be done and then try to convince the farmers, or first getting the farmers on board and then with their support approach regulators.

The panellists answered that farmers have to lead the way, they have to understand what seed industry can provide to them; in South America it will depend on country by country basis, the breeders need to think creative systems to collect information from farmers but have to work jointly, trust between breeders and farmers is a must. Breeders cannot do without the farmers; farmers should understand the need for generating resources for research and innovation; farmers are aware they need progress.

In conclusion of the panel discussion, M. Nilsson, the new Chairperson of the ISF Working Group informed of a new study that had been launched to cover soybeans and involve different countries.

The participants and the Chairman thanked and applauded the panellists and the moderator for the interesting debate.

7. OECD Ad-hoc working Groups

Mr Michael Ryan was invited by the Chairman to provide the meeting with an overview of on-going work in OECD. The speaker reminded that objective of OECD Seed Schemes is to facilitate trade of high quality seed; to reach this goal the Organization works with Member Countries and all the stakeholders in developing the best approaches to deal with certification at international level and tries to simplify and harmonize procedures. He informed also that new Countries had applied to join the system: Indonesia, China, Korea, Senegal Zambia and Tanzania. Then Mr Ryan reported on the work of Seed Schemes' Ad-hoc Working Groups. One of them is in charge of evaluation of bio-chemical and molecular techniques in view of adoption of this modern technology as a supplement to control

plots and field inspection; anyhow OECD certification will continue to be based on inspection of morphological characteristics of the plant but some National Authorities will have the option to use them in the case of doubtful situations and most likely it will become more and more important in the future; for 2014 OECD, UPOV and ISTA have organized a joint workshop on this matter. Another important WG deals with electronic certification: as more technology moves-in in all areas of human activities, there is a growing demand to have certificates and labels dealt purely through electronic technologies and more need to assure authenticity. One more WG is looking at maximum seed lot size within OECD Seed Schemes: a discussion within the Seed Schemes was on-going debating if it was really needed to have this in the certification protocol and what advantages did it bring to certification. Another WG is looking at maximum lot size within OECD labelling: this is a critical part of the certification process but it has been argued whether it is needed to have a maximum seed lot size established by the Schemes. Another area is on OECD labelling and the key aspect is to have tamper-proof labels: development of new technologies and the growing size of consignments are creating new challenges; the WG has been looking at how to deal with these challenges, among ideas proposed the use of barcode. Other two WG deal with certification of mixed seed lots based on mixtures or blends of varieties and with how to deal with experimental and pre-certified type of seed: adoption of a special label had been proposed and evaluated but after much discussion there had been insufficient support from the National Designated Authorities that has stated that such genetic material was covered sufficiently by the current legislation.

A participant to the meeting commented favourably that new countries were candidate to participate at OECD Seed Schemes and added that previous presentations had highlighted how important free exchange of seed is; sometimes the process does not seem to be facilitated, for example when new countries apply to Seed Schemes, Member Countries of OECD should be more active, help new members in the process, support them during all the procedure and indicate them how to use OECD to facilitate trade.

8. Any other business

Priorities of the Section

The Chairman reminded that in the last Section Board meeting the Members had discussed and agreed the priorities of the Section; these are: innovation, public relations and outreach, intellectual property and global movement of seed; sub-priorities could be proposed as soon as a new issue arises.

Vice-chairmen

The Chair informed that it had also been agreed that the 3 Vice-chair would be supporting the Chairman and the Board specifically addressing issues requiring acting or responding very quickly; they should help putting together proper response and define a proposal that would be submitted to the Secretariat and to the Board for review.

9. Closing the meeting

There being no other business to discuss, the Chairman thanked the speakers, all the participants and the Secretariat and closed the meeting at 12.40 h.

Report of the Meeting of the Seed Applied Technologies Committee

Held on Wednesday, 29 May 2013

Chairman: **Mr. Greg Lamka (US)**

1. Call to order, antitrust statement and adoption of the agenda

The Chairman called the meeting to order at 13.30 h and welcomed - according to the attendance list - 135 participants from the following 32 countries: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, China, China Taiwan, Denmark, France, Germany, Greece, Hungary, India, Israel, Italy, Japan, Kenya, Republic of Korea, Lebanon, Netherlands, New Zealand, Poland, Serbia, South Africa, Sweden, Switzerland, Turkey, United Kingdom, United States, Uruguay as well as ISF guests from APSA, ESA and SAA.

There were no further comments to the anti-trust guidelines. The draft agenda that was circulated with the congress documents was adopted unchanged.

2. Minutes of the Rio Meeting (Rio Congress Report, pp. 28-31)

The minutes of the meeting held in Rio de Janeiro on June 2012 were approved by written procedure. No further comments were made.

3. Composition of the Committee, Sub-Committees, Working Groups

The Chairman gave the participants a description of the process and the reasons that were behind the change from STEC, a special committee of ISF, to the new SAT-Com, a full standing committee: seed applied technologies were becoming very important in seed business, there was more interest in integrating all components of the activity (seed, seed treatment and application of seed treatment) seed applied technologies were becoming a strong industry driving force; STEC members proposed and the Board of Directors decided to make that Committee more visible and

better structured, to give it a greater importance and provide with opportunities for means to support the seed trade.

The composition of the Committee was shown on screen it indicated 15 members and the existence of 3 Sub-Committees (SC), each one chaired by a SAT-Com elected member assisted by 4 members; the SCs will be responsible to address issues and topics in the areas that have been identified by the SAT-Com. The main topics of each SC were Technology, Regulatory and Communication. It was mentioned that Working Groups can be created for a specific item and external expertise may be sought; ISF members willing to contribute with their expertise were invited to participate in these WG.

Changes in composition were also mentioned: a member had to leave because of health reasons; two other resigned because they had changed position in their companies. New members have been elected and approved by the Board of Directors: these were Ms Eda Reinott and Mr Richard Garnett. One position was still pending approval.

4. The SAT-Com Subcommittees

The Chairman invited each Sub-Committee leader to report on the activities of their groups.

For the Technology SC, Martin Gruss indicated the main topics which were in the scope of that SC: use of seed applied technologies, the benefits they have for the seed industry and stewardship. To demonstrate the benefits of seed applied technologies a presentation about the findings of the Compass study in Europe was supported and coordinated by the SC [this presentation was given later in the meeting by the authors of the study]. It was mentioned that new technologies, as for example biological products, were coming on the scene; for these, the SC members felt necessary to propose harmonization of definitions. Stewardship will require special efforts to develop sound guiding principles on how to handle products safely and in a professional way. The revision of the "Industry Guidelines for Good Use Practices and Standard Requirements in the Use of Seed Treatment" was carried on and finalized by this SC; they will be proposed for publication; "Operators Safety" was indicated as the document that the SC was to revise next. Among items of future interest by the Sub-Committee its members proposed the development of guidelines about the requirements for optimal seed treatment, and to prepare a descriptive document about what could be a "good quality seed treatment" to help answer the questions of manufacturers and users.

Franz Brandl, lead of the Regulatory Environment Sub-Committee, explained that among the tasks of the SC were: - to monitor and to assess regulatory trends and especially to maintain the freedom to

operate with seed applied technologies; - to run an overview of impairments and of trends in movement of treated seed; - to monitor regulations on minor use of seed treatment and - to assess what are the trends in registration of biological products. Since the biological sector is developing quickly, there is a need for the seed industry to understand the issues unique to these products and begin to proactively address them. It was reminded that this SC had the responsibility for the ISF Guidelines, of the current 5 Guidelines will be updated and the revised version will be posted on the ISF webpage. These guidelines will provide documentation of the industries' commitment to the responsible and safe use of seed applied technologies.

Karen Arthur lead of the Communication Sub-Committee reported to participants that her group was involved in education and training on seed applied technologies and in communication of issues occurring in the seed industry; additional responsibility was to propose and organize workshops and seminars aimed at promoting the good use of seed applied technologies. During the previous months the Sub-Committee had been working with the Gates Foundation exploring alternative ways to introduce seed applied technologies into developing countries to help those countries maximize crop outputs; a draft project has been proposed for selected countries in Sub-Saharan Africa. Another area of action agreed few days before was to prepare communication about the neonics chemistry and the status of it in the EU; it was announced that the SC will be working on a strategy proposal on how the ISF will communicate to outside world on seed applied technologies.

5. The revised Guidelines about use of seed treatment

The Chairman reminded that the 5 Guidelines that had been prepared by the former STEC were showing their age and appeared obsolete or superseded in some cases; the Sub-Committees had been working at a complete revision and update of them; additional wordsmithing and legal review was still necessary; they will be posted again in the web page of ISF as soon as this review is completed.

6. The Compass Report - The value of neonicotinoids seed treatment

Mr Garlich von Essen from the European Seed Association summarized the initiatives and the actions that took place in Europe to manage properly the application of crop protection products to seed; he introduced Mr Steffen Noleppa and Mr Thomas Hahn, co-authors of the Compass Report, a socio-economic analysis on the benefits and impact assessment of the neonicotinoids

technology, who had prepared and were going to give a presentation on this matter.

The Study, conducted during 2012-2013, focused on maize, sunflower, oilseed rape, sugar beet and cereals and was performed in 10 European Countries. Among the aims of this Report, to provide information and tools to who had to decide about a new technology; usually the elements for such decisions are based on biological aspects not on socio-economic ones; the merit of this Report was to have identified and valued the socio economic aspects in the short and medium term. Sophisticated calculation techniques were adopted to assess agricultural costs and changes of revenues; models were used to calculate effects on agricultural market and trade; interviews with many experts were made to identify new farming practices and economically important areas. Five main impact areas where neonics support profitability and viability of companies were identified: increase of productivity, management of risk due to adversities, management of work load and complexity of action, enabling investments and new agricultural techniques, protection of large scale economies. The study indicated that the neonics contribute extensively to profitability of the crops: this was estimated at 20% for corn, at 40% for sugar beet and up to 60% for oilseed rape. Examples showed that the adoption of neonics on sugar beet seed in Germany had protected the plants from leaf yellowing and generated yield increase; in Spain the technology enabled earlier planting of sunflower, gave a longer vegetative period to the plants and these delivered higher production. The possible loss of this technology would have heavy impact on the European agriculture, it was calculated that the maize seed industry would face an income decrease of 120 million Euros per year if neonics were not available.

The major economic impact of the non-availability of this technology in the EU would cause almost 5 billion Euro loss in the first year, the farmers would not be able to fully compensate this non-availability, after a period of 5 years the estimation is that the European economy will potentially lose 17 billion euros, the pest pressure will increase and a potential 26.000 jobs could be at risk; the export of commodities from Europe will decrease by 16% for wheat and 38% for barley, the import of corn will increase by more than 50 per cent and same trend for raw sugar, sunflower and soybeans these new needs will require additional 3,3 million hectares of land to be put under cultivation elsewhere.

The presentation concluded stating that seed treatment with neonicotinoids is a key and often irreplaceable technology (lack of immediate and efficient alternatives), hence, a suspension of use would have tremendous economic and environmental implications; besides neonics, many

other productivity-oriented technologies are currently under pressure; the articulation of perceived risks became manifest in public discussion; scientific facts are often neglected or blamed, especially if science doesn't meet perceptions, science-based facts need to re-enter public and policy discussion. There is the need to distinguish perceived risks from real risks, to holistically analyse risks of adoption as well as of non-adoption of technologies; it can't be ignored that productivity increase is a must for essentially needed agricultural growth. Therefore, it was felt the need to re-discover the productivity issue by, e.g.: making clear how a world without sustainable productivity growth would look alike; focusing not only at risks/trade-offs, but also at chances/synergies technologies offer; and inviting "perceptionists" to participate at open-minded fact-finding dialogues. The speaker ended suggesting that the COMPASS approach could be applied to other regions and/or technologies. More information and the complete report can be found at: <http://www.neonireport.com/home/project-compass/>.

Several questions or comments followed the presentation.

A participant asked if questions were made when the report was presented to national and international authorities; the speakers said that not many questions were asked besides some comments about the magnitude of the findings.

Another participant commented that an advantage of the study was the possibility to validate the predictions one year after its conclusion and if the authors had foreseen this; for example this validation could show that the amount lost in Europe was 3 billion Euros as predicted, or could be much more or much less. The speakers answered affirmatively and added that it would be important to distinguish what is caused by neonics and what by other market developments; for their activity the authors continuously try to validate the approach to confirm the reliability of the results of their studies.

From the main table it was added that a validation of some results would be possible in Europe because in 2014 no neonics will be useable on corn; the National Seed Associations could help monitoring the situation and collecting data to document some of these effects.

Another participant asked what the next steps with the report were going to be. The speakers replied that most of the things were already done; other actions would be a broad distribution of the report, making presentations wherever needed and asked, use the findings to create awareness. They added that these were facts that are documented and recommended to continue using those figures in the discussions; need to get science back in the decision making processes.

The Chairman stated that the SAT-Com had a communication person who would help finding how to spread the information as part of ISF role, think about and say how that information could be leveraged; he added that it would be very important to be proactive and act before other decisions are made, to tell also the other part part of the story before decisions are taken and not to have a defensive communication.

From the audience it was commented that in spring 2014 a lot of farmers will have serious problems as a consequence of the suspension of the use of neonics as seed treatment, a new way to communicate would be to make people feel the emotions of the European farmers about the things happening in Europe.

One last comment indicated and suggested to take the study and its findings at government level in some non-European countries, such action would be very helpful to have a more balanced, scientific and economic analysis before the decision making process. Again it was answered that National Seed Associations were in the best position to distribute this information for local use.

7. Any other business

There was no other business proposed for discussion.

8. Closing the meeting

The Chairman reminded the audience that next meeting would be in Beijing in May 2014, thanked the speakers, the participants, the Sub-Committee leads who co-chaired and closed the meeting at 15.00 h.

ISF GENERAL ASSEMBLY

Held on Wednesday, 29 May 2013

Chairman: **Mr. Tim Johnson** (US), President ISF.

1. Call to order, antitrust statement, roll call

The Chairman called the meeting to order at 15.30 h.

He reminded the audience of the ISF Antitrust Guidelines circulated with the Congress documents.

The Chairman made the roll call: 148 participants attended the meeting.

The following members were present or represented by proxy:

Ordinary members: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, China, China Taiwan, Czech Republic, Denmark, Egypt, France, Germany, Greece, Hungary, India, Italy, Japan, Kenya, Republic of Korea, Netherlands, New Zealand, Philippines, Poland, Serbia, Slovenia, South Africa, Spain, Sweden, Switzerland, Tunisia, Turkey, United Kingdom, United States, Uruguay.

Associate members: France: Bayer CropScience, Groupe Limagrain, SICASOV; Germany: KWS Saat AG; Iran: Behta International Ltd, Paliz Agricultural Services; Luxemburg: Barenbrug Semences; Romania: SC ITC Srl, SC Sem-Luca Srl; Spain: Geslive; Switzerland: Syngenta, Monsanto International; Thailand: East-West Seed International Ltd; Tunisia: Agriprotec; United States: DuPont Pioneer, Monsanto.

The number of votes present or represented was 242 for Ordinary members and 44 for Associate members, making a total of 286 or 71.5%. As the total of votes for the Federation was 400, with a required quorum of one third, the General Assembly was validly constituted.

The Chairman presented the apology from Mike Roth, Monsanto's usual representative in a number of countries, who could not be present in the meeting as he had had to fly back to attend a funeral in his family.

2. Adoption of the agenda

The agenda was adopted as circulated with the Congress documents.

3. Comments from the Sections / Committees further to their meetings

No comments were added further to the meetings of the Sections and Committees.

4. ISF membership

4.1 *Election of new ISF members*

The Chairman referred to the list of applications 13.078 and 13.078-a circulated with the Congress documents and shown on screen.

There were no questions or additional comments.

The General Assembly unanimously elected the following members with applause:

Ordinary members: Afghanistan National Seed Organization (ANSOR), Afghanistan; China National Seed Association (CNSA), China; Seed Association of Pakistan (SAP), Pakistan; Asociacion de Productores de Semillas del Paraguay (APROSEMP), Paraguay.

Associate members: Misr Agricultural Development Company, Egypt; Seed Bound, Lebanon FMC United Pvt Ltd, Pakistan; Rito Tohum A.S., Turkey.

Affiliate members: FMC Seed Treatment, Canada; Taiwan Institute of Economic Research (TIER), China Taiwan; Emkat, Greece; Phenome-Networks, Israel; Amalia Sal, Lebanon; Yara UK Ltd, United Kingdom.

Observer Ordinary members for two years: Somali National Seed Organization, Somalia; National Seed Association of Peru-APPISemillas, Peru.

Observer Associate member for one year: Jullundur Pvt Ltd, Pakistan.

4.2 Discontinuation of membership

The Chairman referred to documents 13.079 and 13.079-a. M. Bruins indicated that since the circulation of documents three weeks before the Congress, one resigning Observer member, the Paraguayan Seed Association APROSEMP, had changed its position and wished to become an Ordinary member. One resigning Affiliate member, Advance Sorting Machine from Italy, had also changed its position and wished to continue its membership.

The list was shown on screen. There were no questions or additional comments.

The General assembly unanimously approved the membership discontinuation by applause.

5. Proposal for revision of the ISF Articles of Association

The Chairman referred to documents 13.080 and 13.080-a sent six and three weeks before the Congress.

M. Bruins explained the two proposals for amendments to the ISF Articles of Association. The first one was to give more recognition to the International Seed Health Initiative. The second one was to slightly increase the base fee multiple in two classes of Associate members.

There were no questions or additional comments.

The General Assembly unanimously approved the amendments to the ISF Articles of Association.

6. Adoption of position papers

6.1 Position paper 'ISF View on Low Level Presence in Seed'

The Chairman referred to documents 13.085 and 13.085-a. The position paper had been discussed during the open meeting of the Breeders Committee. M. Bruins explained that through good communication between the different parties, better understanding had been reached and the French Association UFS had agreed to withdraw its proposed amendment and comment.

The position paper as circulated originally (13.085) was now up for approval.

There were no questions and no additional comments.

The General Assembly unanimously approved the position paper 'ISF View on Low Level Presence in Seed' with applause.

6.2 Position paper 'Industry Viewpoint on Indirect Seed Health Tests'

The Chairman referred to documents 13.086 and 13.086-a. M. Bruins showed the position paper on screen and went over the proposals one by one. In red were the proposed amendments received three weeks before the Congress. In blue was the

outcome of the discussions held during the Phytosanitary Committee meeting the previous day with their recommendation on the different amendments.

There were no questions and no additional comments.

The General Assembly unanimously approved the position paper 'ISF Viewpoint on Indirect Seed Health Tests'.

7. Financial matters

7.1 Adoption of the 2012 accounts

The Chairman gave the floor to Vincent Vuille, Treasurer of ISF, presenting the financials to the General Assembly for the first time.

V. Vuille referred to document 13.081 distributed with the Congress program and showed several graphs on screen to illustrate the 2012 accounts. He confirmed that the 2012 results had been very good and had surpassed the original budget, thanks to an excellent outcome of the Rio Congress.

The Treasurer went on to explain that two thresholds must be respected according to the ISF Articles of Association. The ratio of reserves including the Congress Fund in percent of fixed expenditures must be at least 150 %. The ratio of reserves without the Congress Fund in percent of fixed expenditures must stay between 1.15%-1.85%. The 2012 results showed that these ratios were nicely in the mean of ISF guidelines.

V. Vuille concluded that the ISF finances were healthy with the current expenses. Should the expenses increase, for instance with the hiring of more staff, then the figures would come closer to the thresholds.

7.2 Auditor's Report

The Treasurer referred to document 13.082 distributed with the Congress program. He read the review made by the auditor CTR Audit and Conseil SA. The auditor had examined the financial statements of ISF and had found them to comply with Swiss law and the company's articles of association.

The Chairman asked if there were any comments. There were none. He asked that the 2012 financial report and the auditor's report be accepted. The General Assembly unanimously approved by applause.

7.3 Nomination of the Auditor: The proposal is to renew the mandate of CTR Audit and Conseil SA

The Chairman asked if there were any questions or comments. There were none.

The General Assembly unanimously accepted the renewal of mandate of CTR Audit and Conseil SA by applause.

7.4 Discharge to the BoD and the Secretary General

The Chairman asked the General Assembly to discharge the Board of Directors and the Secretary General by accepting the 2012 results. The General Assembly unanimously approved by applause.

7.5 Approval 2013 budget and the 2014 provisional budget

V. Vuille continued with the presentation of document 13.083. He compared the 2013 original budget, which had been reviewed by the Board of Directors in Montevideo the previous year, with the planned 2014 budget. The preliminary results showed a loss of CHF 60,000.

One question was raised by a participant on the reasons for the increase. The Treasurer explained that the hiring of one additional expert in the Secretariat would lead to higher salary, mobility and office rent costs. M. Bruins added that the traveling distance to the 2014 Congress in Beijing would increase the staff's costs compared to Greece.

There were no further comments. The General Assembly unanimously accepted the 2013 budget and the 2014 provisional budget by applause.

7.6 Fees: The BoD proposes keeping the base fee unchanged for 2014 at CHF 3150

One comment was made and it was noted that there had been a typo in the phrasing of item 7.6. The Chairman asked the General Assembly to accept the base fee unchanged at CHF 3150 for the year 2014 instead of 2013. It was unanimously approved by applause.

7.7 The BoD proposes increasing the base fee multiple for Associate members in Class 1 from 0.34 to 0.5 and in Class 2 from 0.84 to 1.0

This item had already been dealt with by item 5.

8. Future Congresses: The BoD proposes France for 2019

The Chairman requested the General Assembly to accept the proposal to organize the 2019 ISF World Seed Congress in France. It was unanimously approved by applause.

9. Elections

9.1 Members of the Board of Directors

The Chairman asked M. Bruins to show on screen the document 13.084 circulated with the Congress program. This year four members of the Board of Directors were up for election or re-election.

The General Assembly unanimously re-elected Mr. Winston Davies, Uruguay; and elected new Board of Directors members: Mr. Ywao Miyamoto, Brazil; Mr. Vicente Navarro, Spain; and Mr Wim Nijssen, Netherlands.

9.2 Section Chairperson: The BoD proposes electing Vicente Navarro as Chairman of the ISF Vegetable and Ornamental Crops Section

The Chairman explained that Anton van Doornmalen's terms of mandate as Chairman of the Vegetable & Ornamental Crops Section had come to an end this year.

M. Bruins presented the proposal by the Board of Directors to elect Mr. Vicente Navarro as new Chairman of the ISF Vegetable & Ornamental Crops Section.

Mr. Navarro stood up and was warmly applauded by the General Assembly.

9.3 ISF Second Vice-President: The BoD proposes electing Jean-Christophe Gouache as Second Vice-President

The Chairman introduced JC Gouache, Chairman of the Breeders Committee, announcing that a new chairperson would have to be found in one year. He welcomed him as Second Vice-President.

Mr. Jean-Christophe Gouache stood up and was warmly applauded by the General Assembly.

10. Any other business

The Chairman called the members of the Greek Seed Associations present in the room to stand up for a huge applause for the job done in organizing the Congress. The floor was given to Mr. George Pontikas, who was happy to report that several records would probably be broken in Athens. Close to 1600 delegates and especially 52 delegates from Greece had participated in the Congress. He invited all the members to come to the Gala Dinner and celebrate.

11. Closing the General Assembly

The Chairman reiterated his wish to see three things close to his heart as President of ISF:

1) To accomplish win-win situations. The adoption in Athens of two important position papers for the seed industry was an example.

2) The important business he had seen in the trading rooms was good not only for the Federation but also for the national and regional seed associations.

3) Finally, he was asking everyone to get ready for a fun evening at the Gala Dinner.

The Chairman drew the meeting to a close at 16.20 h.

* * *

Tribute to the Departed

Since our last Congress, we have learned of the death of **Mr. Pierre Lefebvre**, France.
Mr. Lefebvre was a member of the Board of the FIS Vegetable Seed Section from 1992 to 1998 and became
Chairman of the FIS/ISF Vegetable & Ornamental Crop Section in 1998 until 2004.

* * *

29th ISF Golf Championship

The 29th ISF Golf Championship took place at Glyfada Golf Course.
22 players participated in the competition.

The winners were:

Ms. Madelon Barenbrug for the ladies' score and **Mr. Shawn Brook** for the gentlemen's score.

* * *

Host Countries of Future Congresses

2014	CHINA	2016	URUGUAY	2018	AUSTRALIA
2015	POLAND	2017	HUNGARY	2019	FRANCE

* * *

Countries represented, Number of Delegates and (Accompanying Persons)

Algeria	1	(0)	India	32	(3)	Romania	3	(1)
Argentina	25	(6)	Iran	14	(0)	Russian Fed	14	(3)
Australia	27	(7)	Ireland	6	(1)	Saudi Arabia	1	(0)
Austria	12	(0)	Israel	39	(0)	Serbia	21	(1)
Belgium	14	(1)	Italy	80	(3)	Singapore	1	(0)
Brazil	15	(5)	Japan	30	(2)	Slovakia	2	(0)
Canada	16	(9)	Jordan	6	(2)	Slovenia	1	(0)
Chile	17	(3)	Kenya	11	(3)	South Africa	24	(6)
China	93	(0)	Korea, Rep of	13	(0)	Spain	24	(2)
China Hong Kong	2	(0)	Lebanon	16	(0)	Sweden	5	(0)
China Taiwan	3	(0)	Libya	2	(0)	Switzerland	23	(1)
Colombia	3	(1)	Lithuania	2	(0)	Syria	1	(0)
Cyprus	3	(0)	Luxembourg	1	(0)	Thailand	6	(2)
Czech Republic	22	(0)	Morocco	6	(1)	Tunisia	8	(2)
Denmark	23	(2)	Netherlands	100	(18)	Turkey	43	(3)
Ecuador	3	(1)	New Zealand	24	(3)	Ukraine	11	(0)
Egypt	3	(0)	Pakistan	4	(0)	United Kingdom	21	(3)
Finland	4	(0)	Paraguay	2	(0)	United States	139	(35)
France	112	(12)	Peru	1	(2)	Uruguay	14	(1)
Germany	104	(9)	Philippines	1	(1)	Venezuela	1	(1)
Greece	50	(3)	Poland	4	(0)	Zambia	1	(0)
Hungary	6	(0)	Portugal	2	(0)	Zimbabwe	1	(1)
						TOTAL	1319	(160)

(Additional participants in the exhibit booths: **67**)

ISF BODIES AND PERSONALITIES 2013-2014

As per elections in Athens, May 2013

For up-to-date lists, please contact the Secretariat

ISF Board of Directors

(*) *The figures indicate the years of election and re-election (m.a.l. means member-at-large)*

President

1 Tim Johnson 2012
Illinois Foundation Seeds, Inc. 2007 (m.a.l.)
25 Executive Drive, Suite F
LAFAYETTE, Indiana 47905 USA

First Vice-President

2 Alvaro Eyzaguirre 2012
Semillas Pioneer Chile Ltda. 2008-2010 (m.a.l.)
Av. El Bosque Norte 500, Of. 1102
6650185 SANTIAGO Chile

Second Vice-President 2013
and Breeders Committee 2010-2012

3 Jean-Christophe Gouache 2009 (m.a.l.)
Groupe Limagrain
B.P. 1
63270 CHAPPES France

Immediate Past-President

4 Truels Damsgaard 2012
DLF-Trifolium 2002 (m.a.l.)
Ny Oestergade 9
4000 ROSKILDE Denmark

Treasurer

5 Vincent Vuille 2012
Otto Hauenstein Seeds
Bahnhofstrasse 92
8197 RAFZ Switzerland

Vegetable and Ornamental Crop Section

6 Vicente Navarro 2013
Nunhems Spain, S.A.
Camino de Los Huertos
46210 PICANYA (Valencia) Spain

Forage and Turf Crop Section

7 John Gilbert 2008-10-2012
Germinal Holdings Ltd. 2002-04-06 (m.a.l.)
Commercial Road
BANBRIDGE BT32 3ES United Kingdom

Field Crop Section

8 Bryan Gerard 2012
Gerard Seed Solutions
3540 South US 231
GREENCASTLE, Indiana 46135 USA

Phytosanitary Committee

9 Roeland Kapsenberg 2012
DLF-International Seeds
175 W. H Street
P.O. Box 229
HALSEY, Oregon 97348 USA

Seed Applied Technologies Committee (SAT-Com)

10 Greg Lamka 2012
DuPont Pioneer
7100 NW 62nd Avenue
P.O. Box 1150
JOHNSTON, Iowa 50131 USA

Trade and Arbitration Rules Committee

Invited Guest: Huib Ghijsen 2010-2012
Semzabel Belgium

Members-at-large (m.a.l.)

11-Christoph Amberger 2012 (m.a.l.)
KWS SAAT AG 2008-2010 (FC Chair)
Postfach 1463 2006 (m.a.l.)
37555 EINBECK Germany

12 Winston Davies 2011-2013
Yalfin S.A.
Av. Rondeau 1800
11800 Montevideo Uruguay

13 Eduard Fito 2012
Semillas Fito SA
Calle Selva de Mar, 111
08019 BARCELONA Spain

14 Karol Marciniak 2006-08-10-2012
Danko Hodowla Roslin Ltd
Choryn 27
64-000 KOSCIAN Poland

15 John McKenzie 2008-10-2012
PGG Wrightson Seeds
55 Waterloo Road
P.O. Box 939
CHRISTCHURCH New Zealand

16 Ywao Miyamoto 2013
Sementes Mauá
Av. Higienópolis, 1100 - 4&5 Andares
86020-911 LONDRINA, PR Brazil

17 Wim Nijssen 2013
Takii Europe BV
Hoofdweg 19
1424 PC - DE KWAKEL Netherlands

18 Arpad Pavelka 2012
ZKI – Zöldségtermesztési Kutató Intézet Rt.
Mészöly Gyula u. 6
6000 KECSKEMET Hungary

19 Hiroshi Sakata 2010-2012
Sakata Seed Corporation
2-7-1, Nakamachidai, Tsuzuki-Ku
244-0041 YOKOHAMA Japan

20 Azariah Soi	2010-2012		
Simlaw Seeds Company Ltd			
P.O. Box 40042			
NAIROBI 00100			
		Kenya	
21 Mauro Urbini	2008-10-2012		
Anseme S.r.l. – Vegetable Seeds Production			
Via Cipro, 60			
47023 CESENA (FC)			
		Italy	
22 Pablo Vaquero	2012		
Monsanto Argentina			
Maipu 1210, 11th Floor			
1006 BUENOS AIRES			
		Argentina	
23 Archie Wilson	2010-2012		
C&M Seeds			
RR #3, 6180 Line Minto 5			
PALMERSTON, Ontario N0G 2P0			
		Canada	
24 Wei Zhang	2012		
China National Seed Group Corp.			
15/F Sinochem Tower, A2, Fuxingmenwai Street			
BEIJING 100 045			
		China	
* * *			
Tree and Shrub Seed Group			
Joëlle Schmitt	2011-2013		
Semillas Montaraz S.A.			
C/Duquestra de Castrejon 9			
28033 MADRID			
		Spain	
* * *			
ISF Honorary Life Members			
Niccolò Morelli	1985		
39, via Curtatone e Montanara			
50053 EMPOLI/FIRENZE			
		Italy	
Antonio Calvelo	1990		
BIOSEM			
Av. Corrientes 127, 6° Piso, Of. 606			
1043 BUENOS AIRES			
		Argentina	
Badrinarayan Barwale	1996		
Maharashtra Hybrid Seeds Co. Ltd.			
Resham Bhawan, 4 th Floor			
78 Veer Nariman Road			
MUMBAI 400 020			
		India	
Gilbert Gouin	1996		
Sodisem			
69 rue d'Alleray			
75015 PARIS			
		France	
Paul King	1996		
New Agriventures, Inc.			
P.O. Box 164			
PAIN COURT, Ontario N0P 1Z0			
		Canada	
Owen J. Newlin	1996		
3524 Grand Avenue #401			
DES MOINES, Iowa 50312-4341			
		USA	
Lucien Matton	1998		
Clovis Matton S.A			
Kaaistraat 5			
8581 Avelgem-Kerkhove			
		Belgium	
Leif Nielsen	1998		
Humlegaard			
Hovedvejen 128			
4720 PRAESTÖ			
		Denmark	
Jean-Louis Duval	2000		
15, rue de Dagny			
77240 CESSON			
		France	
Jürg Hauenstein	2000		
Schluchebärg			
8197 RAFZ			
		Switzerland	
Gisbert Kley	2002		
Im Heidekamp 2			
59555 LIPPSTADT			
		Germany	
Peter Lange	2002		
Tiedexer Tor 2			
37574 EINBECK			
		Germany	
Manmohan Attavar	2003		
Indo-American Hybrid Seeds (India) Pvt. Ltd.			
7 th km, Banashankari-Kengeri Link Road			
Channasandra Village			
BANGALORE 560 061			
		India	
Dietrich Schmidt	2004		
Golden West Seed Research Co. Inc.			
12052 Linda Flora Drive			
OJAI, CA 93023			
		USA	
Christopher Ahrens	2006		
Lundsford Farm			
Lundsford House			
ETCHINGHAM, East Sussex			
TN19 7QH			
		United Kingdom	
Bernard Le Buanec	2006		
24, Rue Treiz-an-Douric			
29100 DOUARNENEZ			
		France	
Selwyn Manning	2007		
24B Crosdale Place			
CHRISTCHURCH 8042			
		New Zealand	
Orlando de Ponti	2012		
Gen. Foulkesweg 68E			
6703 BW WAGENINGEN			
		Netherlands	

(*)The figures indicate the year of election

MEMBERS OF SECTION BOARDS						
Field Crop Section				Vegetable and Ornamental Crop Section		
	Bryan Gerard, Chair	2012	US	Vicente Navarro, Chair	2013	ES
1	Johannes P Angenendt, Vice-Chair	2012	DE	1	Lorena Basso	2012 AR
2	Pablo Bergada, Vice-Chair	2013	AR	2	Franck Berger	2012 FR
3	Archie Wilson, Vice-Chair	2012	CA	3	Fabrizio Ceccarelli	2012 IT
4	Christoph Amberger	2012	DE	4	Peter Dawson	2013 UK
5	Gerardo Bartolome	2013	AR	5	Amnon Eshet	2012 IL
6	Huub Beelen	2012	NL	6	Matthew Kramer	2013 US
7	Eugenie A.C. van de Bilt	2012	NL	7	Marco van Leeuwen	2013 NL
8	Bruno Carette	2012	FR	8	David Malan	2012 ZA
9	Alvaro Eyzaguirre	2013	CL	9	Andreas Mueller	2013 DE
10	Jerry Flint*	2012	US	10	Arpad Pavelka	2012 HU
11	Eugenio Gonzalez	2013	ES	11	Michael Piil	2013 DK
12	Kurt Hjortsholm	2012	DK	12	Hiroshi Sakata	2012 JP
13	Pavel Horcicka	2012	CZ	13	Mary Ann Sayoc	2012 PH
14	Carlo Invernizzi	2012	IT	14	John Schoenecker	2012 US
15	Jean-Paul Krattiger	2013	CH	15	Weihong Tian	2012 CN
16	Karol Marciniak	2013	PL		<i>President – Ex officio</i>	
17	Nigel Moore	2012	UK		<i>1st Vice-President – Ex officio</i>	
18	Malin Nilsson	2012	SE		<i>Jan de Rond: link to SAT-Com</i>	2012 NL
19	Lomo van Rensburg	2012	ZA		<i>To be nominated: link to Breeders Committee</i>	
20	Wolf von Rhade	2012	DE			
21	David Sippell	2013	US			
22	Claude Tabel	2013	FR			
23	Ann Vandecruys	2012	BE			
24	Yusuf Yormazoglu	2013	TR			
25	(Vacancy 1)					
	<i>President – Ex officio</i>					
	<i>1st Vice-President – Ex officio</i>					
	* Jerry Flint: link to SAT-Com					
	<i>To be nominated: link to Breeders Committee</i>					
Forage and Turf Crop Section						
	John Gilbert, Chair	(2008-10-12)	UK			
1	Darrell Dziver, Vice-Chair	2012	CA			
2	Johannes Peter Angenendt	2012	DE			
3	Adger Banken	2013	NL			
4	Jiri Barta	2013	CZ			
5	Paul Frey	2013	US			
6	Stefan van der Heijden*	2012	NL			
7	Kooshi Kainuma	2012	JP			
8	Brian Lever	2012	ZA			
9	John McKenzie	2012	NZ			
10	Ian Misselbrook	2012	UK			
11	Tobias Schmid	2012	CH			
12	Claude Tabel	2012	FR			
13	Giuseppe Tombolan	2012	IT			
14	<i>To be elected by written procedure</i>					
15	<i>To be elected by written procedure</i>					
	<i>President – Ex officio</i>					
	<i>1st Vice-President – Ex officio</i>					
	Soeren Halbye: link to SAT-Com	2012	DK			
	* S van der Heijden: link to Breeders Committee					

MEMBERS OF STANDING COMMITTEES			
Breeders		Trade and Arbitration Rules	
	Jean-Christophe Gouache, Chair (2010-2012) FR	1	Huib Ghijsen, Chair (2010-2012) BE
1	Stephen Smith (IPC) US	2	Andrea Mertens, Vice-Chair DE
2	Anke van den Hurk (SAC) NL	3	Erik Beck DK
3	Erin Armstrong CA	4	Roque Caivano AR
4	Leon Broers DE	5	Fabrizio Ceccarelli IT
5	Frank Curtis UK	6	Gerald Cheynet FR
6	Stefan van der Heijden (l. p. to F&T) NL	7	Jaroslav Chobot CZ
7	Kurt Hjortsholm DK	8	Tomas Cullen AR
8	Xueyi Hu CN	9	Darrell Dziver CA
9	Stefan Madjarac US	10	Raouf Ghariani TN
10	Gloverson Moro BR	11	Maria Gohn AT
11	Pablo Vaquero AR	12	Saskia Jurna NL
12	Bhola Nath Verma ZM	13	Michael Malin US
13	Usha Zehr IN	14	TBC AU
14	(Vacancy 1)	15	(Vacancy 1)
15	(Vacancy 2)		
	<i>President, Ex officio</i>		<i>President, Ex officio</i>
	<i>1st Vice-President, Ex officio</i>		<i>1st Vice-President, Ex officio</i>
	<i>To be nominated: link to V&O</i>		
	<i>To be nominated: link to FCS</i>		
Phytosanitary		Seed Applied Technologies	
1	Roeland Kapsenberg, Chair (2012) US		Greg Lamka, Chair (2012) US
2	Lorena Basso AR	1	Karen Arthur US
3	Franck Berger FR	2	Franz Brandl CH
4	Tomas Cullen AR	3	JanWillem Breukink NL
5	Darrell Dziver CA	4	Joern Dau DE
6	Bill Fuller AU	5	Luc Dormoy FR
7	Kazuo Hatsuda JP	6	Richard Garnett BE
8	Mark Johnson NZ	7	Martin Gruss DE
9	Robert Keene NL	8	Veronique Heyes UK
10	Carlos Kishimoto BR	9	Marco van Leeuwen NL
11	Hubert Lybeert FR	10	Eda Reinot US
12	Jennifer Rashed US	11	Carlos Alberto Salvador AR
13	Dieter Ruecker DE	12	Klaus Schluender DE
14	Henning van Veldhuizen DK	13	Efrat Segal IL
15	(Vacancy 1)	14	Rick Turner US
	<i>President, Ex officio</i>	15	(Vacancy 1)
	<i>1st Vice President, Ex officio</i>		<i>President, Ex officio</i>
			<i>1st Vice President, Ex officio</i>
			Jerry Flint: link to FCS US
			Jan de Rond: link to V&O NL
			Soeren Halbye: link to F&T DK
<p><i>NB: The figures indicate the year of election and re-election</i></p> <p><i>NB2: According to the ISF Articles of Association, art. 15.2, in the BC and SAT-Com, the chairperson is not included in the count, whereas in the other committees the chairperson is included in the count</i></p>			
<p>For up-to-date lists, please contact the Secretariat</p>			

MEMBERS OF OTHER COMMITTEES					
Sustainable Agriculture			Intellectual Property		
1	Anke van den Hurk, Chair	NL	1	Stephen Smith, Chair	US
2	Thomas Nickson, Vice-Chair	US	2	Judith de Roos	NL
3	Mikolaj Aleksandrowicz	PL	3	Huib Ghijzen	BE
4	Miguel Alvarez Arancedo	AR	4	Chris Green	UK
5	Erin Armstrong	CA	5	Claudia Hallebach	DE
6	Fulya Batur	TR	6	Michael Kock	CH
7	Reinhard von Broock	DE	7	Miguel Rapela	AR
8	José Dodds	AR	8	Jose Re	US
9	Christiane Duchene	FR	9	Mike Roth	US
10	Jerry Flint	US	10	Bert Scholte	NL
11	Rajvir Rathi	IN	11	Evans Sikinyi	KE
12	Bernice Slutsky	US	12	Alain Taillardat	FR
13	(Vacancy 1)		13	Filipe Teixeira	BR
14	(Vacancy 2)		14	Antonio Villarroel	ES
15	(Vacancy 3)		15	Usha Zehr	IN
Sugar and Fodder Beet Subsection					
1	Peter Hofmann, Chair	UK			
2	Phillip von dem Bussche	CH			
3	François Desprez	FR			
4	Niels Mikkelsen	DK			
5	Philippe Rousseau	SE			
6	Sina Strube	DE			
7	Ioana Tudor	US			
8	Bruno Vandamme	BE			
9	Rob van Tetering	NL			
<i>For up-to-date lists, please contact the Secretariat</i>					

STAFF AT THE ISF SECRETARIAT

Marcel Bruins	Secretary General
Radha Ranganathan	Director, Technical Affairs
Piero Sismondo	Director, Seed Technology and Trade
Nathalie Huguenin	Event Manager
Mariette Perey	Administrative Assistant
Christine Marti	Secretary-Accountant
Verena Duracoski	Office Worker

LIST OF PRESENTATIONS MADE DURING THE ATHENS CONGRESS

(Available at the Secretariat on request)

❖ **Opening Ceremony**

- Garlich von Essen: The economics of seed technology input
- Marcel Bruins: Progress report of the ISF Secretariat

❖ **Open Meeting of the Breeders Committee**

- Anke van den Hurk: Developments in the ISF Sustainable Agriculture Committee
- Vassilis Koutsouris: EU implementation of the Nagoya Protocol & impact on the rest of the world
- Paula Bramel: The Global Crop Diversity Trust
- Peter Button: General developments in UPOV
- Stephen Smith: Developments in the ISF Intellectual Property Committee
- Szonja Csörgő: The ESA database on patented varieties
- Bernice Slutsky: ISF working group on AP in Seed & position paper 'ISF view on low level presence in seed'

❖ **Open Meeting of the Trade and Arbitration Rules Committee**

- Tomas Cullen: The Incoterms® in international seed trade
- Piero Sismondo: Statistics of ISF arbitration

❖ **Open Meeting of the Phytosanitary Committee**

- Marcel Toonen: Seed testing to fulfil phytosanitary requirements
- Radha Ranganathan: Position paper 'ISF viewpoint on indirect seed health tests'
- Gerard Meijerink: New plant health regulations in the European Union
- Roeland Kapsenberg: Update on the international standard on the movement of seed
- Radha Ranganathan: ISF's Pest Lists

❖ **Vegetable & Ornamental Crops Section**

- Anton van Doornmalen: Changing of the guard
- Anton van Doornmalen: Developments in the Greek horticultural sector
- Vicente Navarro: Challenges facing the vegetable industry
- Weihong Tian: Doing business in China
- Franck Berger: GM Vegetables: Stewardship
- David Francis: The SolCAP project and tomato breeding
- Marcel Toonen: Seed pathogens wanted: Dead or alive
- Tonny van den Boom: Food for thought on access to genetic resources and benefit sharing

❖ **Forage & Turf Crops Section**

- Peter Button: UPOV PBR statistics of forage and turf crops and impact of UPOV membership
- Corné van Beers: Breeders Trust on enforcement of PBR in grass seed
- Grethe Tarp: Update on ISTA matters

❖ **Field Crops Section**

- Thanassis Tsoutsas: Field Crops seed industry in Greece
- Margaret Zeigler: Improving productivity to sustainably meet the demands of a growing world
- Michal Ryan: OECD Ad-hoc working groups

❖ **Open Meeting of the Seed Applied Technologies Committee**

- Thomas Hahn/Steffen Noleppa: The Compass Report – The value of neonicotinoids seed treatment
- Piero Sismondo: The SAT-Com Subcommittees

LIST OF DOCUMENTS ADOPTED DURING THE ATHENS CONGRESS

Adopted by the General Assembly

- **ISF View on Low Level Presence in Seed**

Document available on the ISF website at <http://www.worldseed.org>

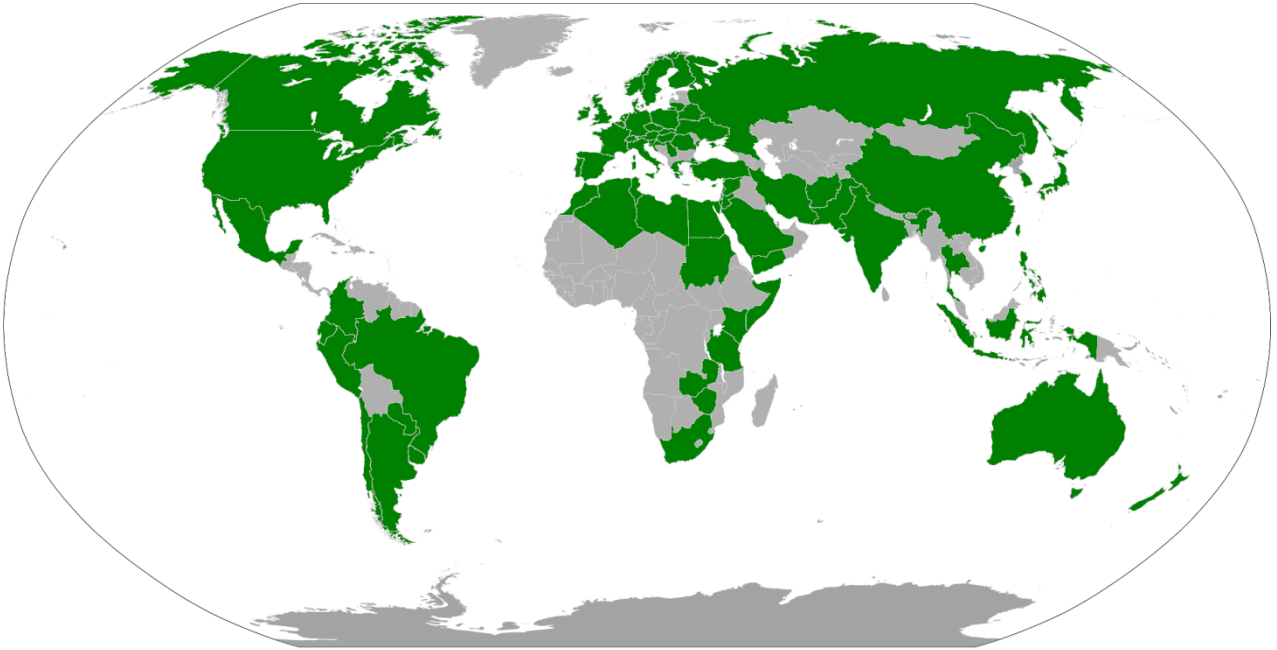
- **ISF Viewpoint on Indirect Seed Health Tests**

Document available on the ISF website at <http://www.worldseed.org>

- **ISF Articles of Association**

The adopted Articles of Association were circulated to all ISF members after the Congress. They are available to ISF members on request.

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STATISTICS**ISF membership countries (in green)**

238 members from 73 countries
ISF members cover 96 % of international seed trade
>7500 seed companies affiliated with ISF

2013

World Seed Market: USD 48 billion

Seed Exports Value: USD 9.9 billion (2011 figures)