

**Food Safety & Sustainable Agriculture Forum 2014, Beijing
July 25-26, 2014**



Responsible institution: China Development Strategy Research Society

Organizer: China Development Strategy Research Society Committee of Cultural Strategy

Undertaking Unit: Yunnan Financial & Economics University Social & Economics Behavior Research Center

Location: Dao Xiang Chun Hotel, Haidian District, Beijing

Attendees from abroad include: genetic researchers, university professors, medical doctors, veterinaries, animal farmers, farmers, farming consultants, food safety activists, moms of children, NGO founders and leaders, social activists etc. from China and Taiwan area, U.S.A, Russia, U.K., France, Denmark, Germany, Australia, Argentina, Brazil and Peru.

Keynote Presentations Morning, July 25 2014

Convenor: Yun Shan, China Development Strategy Research Society
Committee of Cultural Strategy
Prof. Gu Xiu-lin, Yunnan Financial & Economics University Social &
Economics Behavior Research Center

Speakers, presentation and sequence

1. Dr. Hans R. Herren, President Millennium Institute, Germany Founder & Chairman of Biovision Foundation

Title: Agriculture beyond the Green Revolution: Shaping the Future We Want

Abstract:

The International Assessment of Knowledge, Science and Technology for Development (IAASTD) provides the backdrop for this 1st International Forum on Food Safety and Sustainable Agriculture 2014, making the point that a transformation of agriculture and the food systems across the globe is needed to address the issues that the world is facing in terms of long term food and nutrition security and safety. It is by far not enough to continue with the reductionist approach championed through the green revolution to assure sufficient, safe and nutritious food for the decades ahead. The existential problems that are affecting agriculture are mostly self inflicted, this not being restricted to the industrial agriculture model, which is strongly dependent of external inputs, but as well the more traditional practices, which often are mining the natural resources, thus not sustainable either. Part of the problem is short term thinking, profit orientation, technology and consumer driven. The huge pre and post retail wastage of food, added to the pre harvest losses would more than make up the extra food needed by 2050. Today farmers around the world do produce enough food for some 14 billion people, while still , according to the latest count of some 850million are hungry. The one billion obese and over 300 million diabetes type II people are further proof that its the system that is in need of an overhaul. The recognition that consumer food consumption behavior is closely linked to the production patterns is leading to new measures to tackle that end of the system's transformation. Change is now becoming a reality thanks to the wording in the

Rio+20 declaration, which makes the case for a transformation of the agriculture and food systems, supported by national multistakeholder systemic and holistic assessments that will inform new and transformative policies.

2. *Elena Sharoykina, National Association for Genetic Safety (NAGS), Russia*

Title: GMOs in Russia: Current situation and independent scientific research results

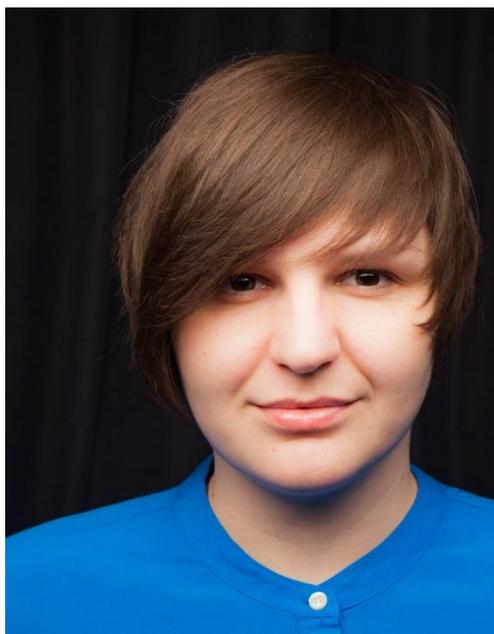


zemlya2010@gmail.com

Introduction

Elena Sharoykina, ecologist, director and co-founder of National Association for Genetic Safety (NAGS)

NadezhdaNovoselova, journalist, public and media relations director of National Association for Genetic Safety (NAGS)



Nadezhda Novoselova: oagb.ru@gmail.com

Abstract

In 2010, NAGS released results of an independent study on the impact of GMOs on the mammals health. The experiment was held on the base of the Institute of Ecology and Evolution of Russian Academy of Sciences on NAGS grant. The study results shown a significant negative impact of feed containing GM ingredients on reproductive functions and health of laboratory animals.

ABOUT NAGS: National Association for Genetic Safety (NAGS) is russian non-profit organization, founded in 2004. NAGS's activities are aimed to contribute the protection of biological and genetic safety of humankind and the environment, and to promote sustainable development ideas in human consciousness.

GMOs: Since its foundation NAGS has had a great influence on the development of public debate concerning the safety of modern biotechnology, including GMOs, in Russia.

In 2008 NAGS in partnership with the Institute of Ecology and Evolution of A.N. Severtsov of Russian Academy of Sciences has conducted its own independent research on the impact of GMOs on the health of mammals. During the experiments hamsters, which were fed with GM soybean meal, were unable to reproduce a third generation of offspring.

In 2013 NAGS announced the start of preparation for the first international long-term study on the influence of GMOs on animals' health. The experiment will involve scientists from around the world. A working science group has been formed and the research protocol is ready. The experiment will take place in Russia. NAGS

and its partners are going to launch a fundraising campaign to attract independent funding for the experiment very soon.

SUSTAINABLE DEVELOPMENT : In 2012 NAGS launched a separate project - environmental initiative "Emerald Planet". Its mission is to promote and realize the ideology of sustainable development. The projects' programs are aimed at the popularization of ideas of waste recycling, responsible consumption, efficient use of natural resources, development and implementation of new ecology technologies in all areas of industry and everyday life.

FOOD SAFETY : Since 2004 NAGS has implemented the project "Public control of the grocery market". NAGS conducts annual independent monitoring of food quality to defend interests of russian consumers. NAGS experts have found serious violations in foods from well-known russian and foreign manufacturers: dangerous bacteria and microorganisms, unauthorized food additives, genetically modified organisms (GMOs) without labeling in baby food etc. Such violations could cause serious health problems. NAGS has repeatedly confirmed the validity of its independent reviews in court, responding to complaints from leading russian and international manufacturers.

ORGANIC AGRICULTURE : NAGS supports the idea of the priority development of organic agriculture in Russia. NAGS's experts take part in creating legislative initiatives for the ecological agriculture system in Russia and makes recommendations for the russian authorities on the issue. NAGS pays special attention to the preservation of Russian agricultural breeds and varieties.

3. Mae-Wan Ho, Scientist, Science, Artificial vs Natural Genetic Modification & Perils of GMOs

The precision, complexity, and all-pervasiveness of natural genetic modification leave organisms and ecosystems particularly vulnerable to artificial genetic modification. Genetics has been turned upside down beginning the late-1970s and especially since the human genome was announced in 2000. The tools of genetic manipulation have advanced by leaps and bounds.

Today, geneticists can dissect and analyse the base sequence of one nuclear acide in a single cell using 'next generation deep sequencing'.

The genome is fluid and dynamic. It is constantly conversing with the environment in circular networks that mark and change genomic DNA in myriad ways. Both DNA and RNA take part in executing and altering genetic information in real time, and in transmitting genetic information to future generations.

Natural genetic modification: The totality of changes made by organisms in the

genetic information of tissues and cells as part of their survival strategy, some of which are passed on to future generations. The new genetics tells us that organisms need to engage in natural genetic modification in order to survive; artificial genetic modification interferes fundamentally with the natural process, and it is well-nigh impossible to avoid doing so.

4. Avila-Vazquez Medardo, Physician Pediatrician and Neonatologist, Faculty of Medical Sciences, National University of Cordoba

Title: Using Glyphosate with GMO Seeds in Argentina

The use of toxic agrochemicals in Argentina is continuously increasing.

1st NATIONAL MEETING OF PHYSICIANS IN THE CROP-SPRAYED TOWNS, Cordoba, August 2010, and 2nd NATIONAL MEETING OF PHYSICIANS IN THE CROP-SPRAYED TOWNS, Rosario, April 2011.

According to clinical observations and findings from doctors: Pesticides affect the health of the population

Acute or immediate effects: Respiratory, dermal, and ophthalmologic effects; Neurological, hepatic, immunological effects

Medium- and long-term effects: Abortions, birth defects, cancers, etc.

Session 1: Harm of Glyphosate & GMO Afternoon, 25th July 2014

Convenor: Chen I-wan, Advisor, Committee of Disaster History to China Disaster Prevention Association; Advisor.

Chai Wei-dong, Author, Unrestricted Chemical And Biological Warfare, China Development Publishing House, 2011

Speakers, presentation and sequence

(1) (USA) Dr. Don M. Huber:

Presentation Title: Impact of GMO-herbicide interactions on nutrition and soil, crop, and animal health.



Email: huberd@purdue.edu; US (208) 615-1710.

Introduction

Dr. Don M. Huber, Professor Emeritus of Plant Pathology at Purdue University, holds B.S. and M.S. degrees from the University of Idaho (1957, 1959), and a Ph-D from Michigan State University (1963). He was Cereal Pathologist at the University of Idaho for 8 years before joining the Department of Botany & Plant Pathology at Purdue University in 1971.

His agricultural research the past 55 years has focused on the epidemiology and control of soilborne plant pathogens with emphasis on microbial ecology, cultural and biological controls, the physiology of host-parasite relationships and herbicide-nutrient-disease interactions.

Dr. Huber is past Chairman of the USDA-APS National Plant Disease Recovery System (program), a member of the APS Threat Pathogens Committee; and former member of the Advisory Board for the Office of Technology Assessment, U.S.

Congress. In addition to these assignments, he is an active scientific reviewer; consultant to academia, industry, and government; and international research cooperator with active projects in various countries as well as the U.S.

Dr. Huber is author or co-author of over 300 scientific journal articles, Experiment Station Bulletins, book chapters and review articles; 3 books, and 84 special invited publications.

He is internationally recognized for his scientific expertise in the development of nitrification inhibitors to improve the efficiency of N fertilizers, interactions of the form of nitrogen, manganese and other nutrients in disease, techniques for rapid microbial identification, and cultural control of plant diseases.

Abstract

Dr. Huber will explain why what we now see in our soils, crops, barns, and environment is not normal. Accepting responsibility for our situation can heal the damage which has been thrust upon us through a betrayal of the public trust that was based on the failed promises and flawed science of genetically engineered crops, and the glyphosate herbicide most GM plants are engineered to tolerate. It is critical that we respond to the growing challenge we face if we are to provide the abundance of affordable, nutritious and safe food necessary for society to flourish in a sustainable manner.

(2) (USA) Robert Allen Streit

Presentation Title #1 Deleterious Effect of Glyphosate on Crops in the U.S. Midwest

Presentation Title #2 Soil remediation for fields polluted by agchemicals

(Note: Presentation #2 moved to Session 4: Sustainable Agriculture



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Introduction

Iowa. Graduated from Iowa State University with degrees in Plant Pathology, Pest Management and Agronomy.

He began his professional career working as a crop consultant for four years with the country's largest consulting firm. Then moved back to Iowa and worked for twenty years as a tech service agronomist with DeKalb Genetics and the Cargill Mycogen Seed groups. This work enabled him to gain experience and knowledge interacting with the country's experts in soil fertility, pest management, plant pathology, weed science and genetics, then transferring that knowledge to individual growers on their farms and in educational meetings. He was also involved in work with some of the first transgenic work on herbicide and insect resistant plants, so understands that science very well. During this time he was also involved in his family's farming and livestock operation.

He moved back into the private Ag consulting field working with individual producers in setting up their crop management program. He has also been involved with several companies in testing their new products and determining how they work and where they fit. This includes several soft pesticides and pest control strategies plus implementation of high yield and foliar fertilizer techniques. Some of that work involved working with fertility and disease management specialists in the US/South America on aerobiology and on the US Rust Task Force. This was with the top scientists and producers in several South American and European countries. It has involved working with several researchers to head efforts to control insects and diseases plus affect plant architecture/physiology using biologicals, soft pesticides in multi-year strategies. Also on tap with Mr. Streit are several private projects where innovative biological fertilizers and polymers boosting fertilizer/pesticide efficiency are being tested and introduced. In recent years he has been involved with many innovative scientists and practitioners in learning and teaching how poor soil health affects food quality and human health. This has led him into several areas of soil remediation research which is expected to be a major curative topic in the future.

Besides his consulting work Bob writes a weekly newspaper column and helps author articles in several publications. He and his wife live outside Ames, Iowa on an acreage where they produce many garden and fruit crops. They enjoy many activities including those with their six grown children and several grandchildren. All but one of their children have graduated from college with several holding advanced degrees.

Presentation Title #1 Deleterious Effect of Glyphosate on Crops in the U.S. Midwest
Abstract #1

The first Genetically Modified crops and traits were developed to help manage serious insect and weed problems. In Zea maize the problem insect was the European corn borer (*Ostrinia nubilalis*) which was accidentally imported from Europe on loads of broom corn during WW 1. In parts of the U.S. there could be as many as three to four generations of insect per growing season, which could lead to a seventy five percent loss in yield as well as major field losses due to collapsed stalks. The crop in which most U.S. farmers had a difficult time in managing weeds was soybean, as it was a poor competitor to many of the weeds present in the 1990s. Herbicide companies were continually introducing new herbicides to try to combat such problematic weeds, but either new variations of weeds moved into the soybean growing territory or the weeds developed resistance to the different chemistries.

Adoption of the new transgenic crops was rapid. Many university spokesmen and members of the media were courted by the major biotech seed firms to extol the virtues of the new varieties. Everything seemed good except for a few cases where animal reproduction problems surfaced or endemic weed populations were resistant to glyphosate. After about ten years more of the problems appeared, but very few researchers or crop advisors were either able to confirm the problems in their own trials or were able to learn about the widespread nature of the problems as nearly every university or magazine had been threatened by the Bio-Tech firms with loss of advertising dollars of libel suits.

Finally Dr. Toshi Yamada of the Univ. of Piracicaba, Sao Paulo State, Brazil sponsored a 2007 conference where select scientists from N. America, Europe, and S. America quietly met to discuss the problems with transgenic crops and the use of glyphosate on such a wide scale. The findings presented and published woke up many crops people who correlated those scientific findings with the problems they were seeing of hearing about in their respective countries. It opened the door and researchers in many countries were wondering if the inserted traits, promoters, or herbicide contaminants were the cause of the many crop, animal and human health problems that began appearing.

That research and recognition of the problem expanded greatly since the Piracicaba conference. There has also been a huge increase in problems associated with use of the insect and herbicide traits, heavier use of the herbicides, and an increase in the glyphosate levels in food and drink. The incidence of chronic diseases, decreased birth rates, GI tract disorders, birth defects, and overall poor health of animals, humans, and crops has increased greatly since 2009. Observant and honest Ag professionals recognize more of these every year. Those beholdng to the Bio-Tech dollars see the problems but have a vested interest in denying the link between their genetic manipulations and publicly decry the link between the genetic manipulations

and overuse of glyphosate and resulting health problems.

The overall problem is one of lack of education about proper mineral nutrition in growing crops and of lack of follow through in correlating this nutritional shortfall with chronic and acute problems. How do we as Ag professionals and teachers get this message across and work to develop solutions? Do certain Ag firms benefit by perpetuating the failed systems and exaggerating the problems? Have they tried to export the problem into other countries where innocent people are affected? Those are ideas we hope to discuss and propose solutions for. The problem is very real and demands action.

(3) (USA) Howard R Vlieger

Presentation Title : What is the Motivation



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Introduction

Howard Vlieger is a third generation family farmer who has been a “student of the soil,” studying why and how the soil works as it does, since 1989. Howard lives on the family farm where he was born and raised in northwest Iowa, and assists his son with some of the farming duties. Since 1992 Howard has been a crop and livestock nutrition adviser. He has founded two companies to help family farmers reduce their dependency on chemical- based farming and transition to biological and/or organic crop production. Howard works and teaches as an independent crop nutrition advisor, helpingcrop and livestock farmers all across the US.

Howard works with scientists and researchers around the world to develop effective solutions, based on the latest science, for the real-life problems farmers are experiencing because of GMO crops and glyphosate. Howard is a co-author and the

primary coordinator of a first of its kind scientific study: the feeding of GMO grain and non-GMO grain to hogs for their lifetime as a meat animal. Howard is an internationally recognized speaker on the topic of GMOs.

“It is an amazing opportunity to be a caretaker of the soil. The good Lord made an amazing creation when He created the soil. It is a true joy to continue the never ending learning experience of working with all of the biological and elemental components of the soil to produce a clean, high-quality, nutritious food for all deserving families to eat. It is an even greater privilege to work with family farmers to help them gain a better understanding of crop and livestock production (nature’s way) to produce premium quality food.”

Howard serves on the board of directors for the Farm and Ranch Freedom Alliance (FARFA) and the Council for Healthy Food Systems (CHFS). His greatest accomplishment is that of being a Christian husband to his wonderful wife Pamela of 33 plus years, a father of 3 young adult children and proud grandfather of one.

Abstract :

An example of the potential dollars of technology fees collected by GMO seed companies annually in North America. What adverse problems have we witnessed in livestock that consume GMO crops that lead up to conducting the pig study. What anecdotal problems did we see in the pig study (Dr. Judy Carman talk about the scientific results of the pig study). What is the BIGGER picture relative to GMOs. Close the talk by demonstrating the fact that the pharmaceutical and chemical companies are one in the same.

(4) (Australia) Judy Carman

Presentation Title: A long-term toxicology study on pigs fed a combined GM soy and GM maize diet



Email: judycarman@ozemail.com.au

Introduction

Dr Judy Carman has a Bachelor of Science, an Honours Degree in Organic Chemistry, a Ph.D. in Medicine in the field of nutritional biochemistry and metabolic regulation, and a Master of Public Health specialising in epidemiology and biostatistics.

She taught chemistry, biochemistry, epidemiology, research methods and biostatistics over many years at various tertiary institutions, including an agricultural college and Adelaide and Flinders Universities.

She has worked in the fields of human nutrition and nutritional biochemistry (including at the CSIRO), HIV/AIDS in Sydney, national injury surveillance, and analysing data from Divisions of General Practice. She was the Senior Epidemiologist in the Communicable Disease Control Branch of the South Australian Department of Human Services, investigating outbreaks of disease in the state, including food-borne, mosquito-borne, zoonotic and pneumonia from *Legionella* species. She led a multi-state study into whether Rabbit Calicivirus could infect people. She has been Adjunct Associate Professor in Health and the Environment, School of the Environment, Flinders University, South Australia. She is the Director of the Institute of Health and Environmental Research, based in South Australia.

She has advised parliamentarians, government and non-government organisations and industry bodies on various matters. She has also held senior positions in the Public Health Association of Australia (PHAA), including convening two national food conferences for it. She is recognised by the United Nations as an expert in the risk assessment of genetically modified organisms (GMOs). She has conducted one of the few long-term independent animal feeding studies into the safety of GM crops.

Collective work by : Judy A Carman^{1*}, Howard R Vlieger³, Larry J Ver Steeg⁴, Verlyn E Sneller³, Garth W Robinson^{5**}, Catherine A Clinch-Jones¹, Julie I Haynes⁶, John W Edwards²

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Abstract

A significant number of genetically modified (GM) crops have been approved to enter human food and animal feed since 1996, including crops containing several GM genes 'stacked' into the one plant. Few of them have undergone long-term animal feeding studies.

We randomised and fed isowean pigs (n=168) either a mixed GM soy and GM corn (maize) diet (n=84) or an equivalent non-GM diet (n=84) in a long-term toxicology study for 22.7 weeks. Equal numbers of male and female pigs were present in each group. The GM corn contained double and triple-stacked varieties. Feed intake, weight gain, mortality and blood biochemistry were measured. Organ weights and pathology were determined post-mortem. There were no differences between pigs fed the GM and non-GM diets for feed intake, weight gain, mortality or routine blood biochemistry measurements. However, the GM diet was associated with gastric and uterine pathologies in pigs. GM-fed pigs had uteri that were 25% heavier (p=0.025) and a higher rate of severe stomach inflammation (32% of GM-fed pigs, 12% of non-GM-fed pigs, RR=2.6; p=0.004) than non-GM-fed pigs. Severe inflammation was worse in males (RR= 4.0; p=0.041) than females (RR=2.2; p=0.034).

(5) (USA) Arthur Grinnell Dunham

Presentation Title: Animal Issues Connected To Glyphosate



Email : cadunham@windstream.net

Introduction

Arthur Dunham DVM, ISU 1974, has been a large animal veterinarian in Delaware County, Iowa, for 40 years. He works with dairy, cow-calf, feedlot, and swine operations. He has a strong background in nutrition. The dairy and swine NRC nutrition guidelines helped support his diagnosis of manganese deficiency with its small ovaries in non-cycling cows and gilts. This discovery, confirmed with liver testing, led to the phone call to Dr. Don Huber in 2007, and the present interest in glyphosate.

Access to a plasma mass spectrograph in 2008 made it feasible to check more trace minerals. Dunham noticed that all hog livers submitted were very low in Cobalt (part of Vitamin B12). This led to work with a Canadian swine consultant who had confirmed Vitamin B12 deficiency in “squatter” fat hogs fed small grains dried down with glyphosate.

Clinical observations spur important questions. Dunham is a clinician and not a researcher, but he would like to see a multidisciplinary approach in both research and regulation.

Abstract:

We typically discuss how large animal veterinary medicine has changed over the past four decades as a result of changing animal feed regimens and cropping practices. These changes include a shift toward pesticide dependent GMO cropping systems, increased antibiotic use, and federal policies that discourage overall biological health. In our talk, we include a discussion of several pig and cow diseases that have become increasingly difficult to manage in the United States during the last two decades. We suspect that this is a result of chemicals that bioaccumulate in the food chain (from crop, to animal, and potentially to human)...Our talks include pictures in powerpoint format, as well as a Q and A or American Ag-trivia round, and optional

book reading.

(6) (Denmark) Ib Borup Pedersen

Presentation Title: A changeover from GMO soy to NON-GMO “natural” soy, gave large health improvements, and a better Economy



Email: pilegaarden@dlgmail.dk

Introduction

Born: Nothern Jutland, Denmark.

Raised on a farm with cows, sows and bacon pigs. Educated in the Danish school system: 10 years. Beekeeper from the age of 11.

Farming education:

Bygholm Agricultural College, including practical training on 12 different farms, working with dairy cows, sows, bacon pigs, arable farms, plus farm maintenance and repair jobs.

Jobs include:

1987 Herdsman on Pig Breeding farm - DK;

1988 Pig Herdsman – DK; 1989 Arable farm –DK

1990-93 Arable / Dairy / Chicken farm – UK

1994-96 Pig Herdsman – DK

In 1996 we bought Pilegaarden, an arable farm with 112 hectares of land. In 1997 we built a 400 sow pig unit, From 2002 we rented another farm building to keep the weaners until 30 kg. In 2007 we extended our farm buildings, in order to have our entire herd in one place, i.e. 450 sows plus weaners, a mill room and grain store.

Abstract

After reading scientific literature on GMO's I discovered that scientists in many

independent studies found infertility, deformed offspring, kidney, liver or other organ damage in test animals. Thus, I wondered if the GMO-soya I fed to my pigs could jeopardize their health, so I decided to do an experiment.

In April 2011 we changed from GMO soya to “natural” soya (NON-GMO) and saw big improvements in the herd’s health, a 2/3 reduction in medicine usage and some sickness disappeared altogether. Production went up and profits increased. This has now been the case for the last 3 years.

The one experiment has become two experiments, as the deformities did not go away. I had expected that they would disappear when I stopped using Roundup Ready GMO soya, as research had shown a link between Roundup and deformities.

I decided to test the feed for Roundup-residues, (Glyphosate) I used the samples of soya I had stored from the loads of soya I had delivered (All in NON-GMO time) I also took tests of my own grains, in a way that I was able to tell exactly how much the feed was polluted with glyphosate.

After switching to NON-GMO soya I have taken pictures and videos of the deformed piglets and stored them in a freezer, as I thought that maybe they could be used in a study at some time.

When I compare the frequency of the deformed piglets, the fertility problems and abortions with Glyphosate levels in feed, I can see a clear correlation between levels of Glyphosate and the problems listed. Food, feces and urine samples of individual sows fed known levels of glyphosate in their diet and samples of my urine and my worker’s urine, show that my urine is on par with sows that have consumed 0,2ppm (Grams / ton) glyphosate in their feed, suggesting that my food, bought in Danish shops, would likewise be contaminated. The sows have raised levels of fertility problems, abortions and deformities!

The Danish university in Aarhus has looked into my findings, and concluded that Glyphosate residues even in lower doses than allowed in feed and food can adversely affect the body’s microflora and the availability of minerals, and through these effects explain my findings.

(7) (Germany) Monika Krueger

Presentation Title : Collateral damages of the herbicide glyphosate in dairy cows, current possibilities to neutralize this contamination



Email: mkrueger@vetmed.uni-leipzig.de; mk.tiermedizin@web.de

Introduction

Doctor of Veterinary Medicine with specialization in Bacteriology and Mycology
Former director of the Institute of Bacteriology and Mycology of the Veterinary Faculty of the University Leipzig (01.05.1993-30.04. 2014)

EDUCATION:

1954/66 - Primary & secondary school, Berlin GDR;

1966/71 - **Student** of Humboldt University, Department of Animal production and Veterinary Medicine;

1971 - **Diploma:** “Isolation of *Chlamydophila (Bedsonia) psittaci* in feces of calves”;

1971/72 - Practical assistance to get professional approbation;

Thesis A: “Artificial infections of calves with *Chlamydophila i psittaci*”;

1982/84 - Postgraduate specialization for laboratory diagnostics;

Institute of Microbiology and Infectious Animal Diseases, Humboldt University, Berlin: **Thesis B** (equivalent to habilitation): “Investigations to distribution of *Bordetella bronchiseptica* in pigs and small laboratory animals. Development of strategies to defense the infection by vaccination.

EMPLOYMENT HISTORY:

1972/76 - **Scientific-assistant**, Institute of Applied Veterinary Hygiene, Eberswalde; Planning and organization of industrial pig farms including sanitation of cadavers.

1977/79 - **Junior Scientist**, Institute of Microbiology and Infectious Diseases, Berlin;

1979/93 - **Senior Scientist**, Institute of Microbiology and Infectious Diseases, Berlin;

1993 - **Professor of Bacteriology, Mycology and Defense of Infectious Diseases in Animals**, Veterinary Faculty, University of Leipzig.

1999-2003 – Vice president of University of Leipzig

MAIN SCIENTIFIC & PRACTICAL INTEREST: Bacterial and mycological

diseases in animals, respiratory infections, gastrointestinal infections, immune system, regulations of gastrointestinal flora in relation to prebiotics and probiotics, gastrointestinal flora and immune system, Clostridium associated infections of animals, especially *Clostridium botulinum* in relation to environmental influences like the herbicide glyphosate, its neutralization with humic acids and identification and control of *C. botulinum* associated diseases by vaccination, pre- and probiosis. Investigations to pathogen Clostridium spp. in biogas plants. About 80 papers and 1 book about bacteriology.

Presentation Title : Collateral damages of the herbicide glyphosate in dairy cows, current possibilities to neutralize this contamination

Author's Monika Krüger, Wieland Schrödl and Awad Shehata

Institute of Bacteriology and Mycology, Veterinary Faculty, University of Leipzig

Abstract

1. Introduction

From the middle of the 1990s unexplainable accumulations of chronic or visceral botulism cases in dairy cows occur in Germany (Böhnel et al. 2011). Usually clostridial infections are opportunistic or factor depended diseases. In cattle *C. botulinum* type C and D intoxications and toxicoinfections predominate, the last one is a new disease in Germany, not approved by governmental authorities, but with growing importance, and nevertheless the cows die. In former investigations it was detectable that only in dysbiotic feces and rumen fluids *C. botulinum* bacteria and/or neurotoxins could be demonstrated (Krüger et al. 2014). The reasons of these results were not explainable by available knowledge. Usually veterinarians, especially bacteriologists investigate the agent, not the circumstances, although they know, most clostridia are opportunistic bacteria. By accident glyphosate was mentioned. Its antibacterial activity (bacteriostasis) was mentioned in two patents, US 7,771,736,B2(2010) and EP 2 327 785 A2 (2011). Glyphosate is an amino phosphonic acid of the amino acid glycine. Being structural analogues of amino acids, amino phosphonic acids usually act as their antagonists and compete with their carboxylic counterparts for the active sites of enzymes or other cell receptors. As inhibitors of metabolic processes, they exert their physiological activity as antibacterial agents, neuron active compounds, anticancer drugs or pesticides, possible application of which range from medicine to agriculture. Amino phosphonic acids are enzyme inhibitors. Most of these enzymes are involved in the metabolism of amino acids

(Kafarski and Lejczak, 1991).

2. Bacterial sensibility for glyphosate

As shown in EP 2 327 785 A2 (2911) bacteria possess two categories of EPSP synthases, one is sensitive for glyphosate in micro molar concentration, the other one is tolerant until resistant. Lactobacilli, enterococci, bifidobacteria, some bacilli are sensitive but salmonelli, some *Clostridium* spp. like *C. tetani*, *C. perfringens*, *C. botulinum* are as far as possible resistant for glyphosate. Incorporation of glyphosate by feed leads to significant reduction of such health promoting bacteria like lactobacilli, enterococci, bifidobacteria, but to increasing of pathogen clostridia. Unfortunately a genus of important antagonists (*Enterococcus*) of *C. botulinum* belongs to glyphosate sensitive bacteria. In two papers (Shehata et al. 2012, Krüger et al. 2013) these results are shown. Glyphosate substitution of rumen fluids with a crude fiber rich diet (84%) leads to significant decrease of cellulytic bacteria and protozoa. The glyphosate substitution to rumen fluids with concentrate feed (40%) didn't influenced the number of health promoting bacteria. In both cases pathogen clostridia significantly increased in relation to increased glyphosate concentrations (Ackermann, 2014). Already Fischer et al. (1986) detected negative effects of glyphosate on growth of *E. coli*, *P. aeruginosa* and *B. subtilis* due to inhibition of aromatic amino acids negatively feedback to shikimate pathway intermediates. In latest investigations Krüger et al. (2014, submitted) detected highly glyphosate resistance of ESBL enterobacteria.

3. Detection of glyphosate in urines, organs and tissues of dairy cows and other animals

Animal and humans incorporated glyphosate with feed or food excrete about 20-30% by urine. In urines of Danish and German dairy cows fed with GMO soy glyphosate was detected. The concentrations were different from farm to farm, but in conventional dairy cow farms all animals excreted glyphosate. Interestingly in GMO free regions of Germany significant lower or really zero glyphosate excretion was detected. Glyphosate was also detected in urines of humans, significant lower of persons with organic food and significant higher of persons with chronic diseases. The highest glyphosate concentrations were detected in urines of fattening rabbits. It was also possible to detect glyphosate in urines of hares in in organs and tissues of malformed piglets.

4. Collateral damages in dairy cows

The clinical picture of chronic botulism goes along with excessive loss of weight, movement disorders, flock stiff stilted gait, paresis, apathy, engorgedveins on

tarsus, positive venous pulse, mucous saliva, reduced tailtonus, small wounds in the udder region. Because of glyphosate is a chelator blood specimens of Danish and German dairy cows were investigated for trace elements (Zn, Mn,Co, Cu, Se). In nearly all Danish cows Mn and Zn levels were deeply below the reference levels. Mean Se, Cu and Zn values were in the reference range, but some cows were below the minimum level. The high GLDH values are explainable.

Interestingly therapy resistant downer cows had significant higher GLDH, CK, urea levels in blood serum, but significant lower cholesterol. Seemingly in cases of therapy resistant downercows glyphosate is involved.

5. Neutralization of glyphosate

According to Piccolo et al. (1996) we used humic acids to neutralize glyphosate. In *in vitro* and in field trials it was possible to neutralize glyphosate by humic acid WH67 (Gerlach et al. 2014). Excretion of glyphosate by urine was significantly reduced.

6. Conclusions

Contamination of feed with glyphosate influences gastrointestinal microbiota. The result is a dysbiosispromoting germination of *C. botulinum* spores and generation of neurotoxins. The chronic botulism is the result. Due to contamination of feed and food with glyphosate animals and humans are contaminated with glyphosate. Clinical diseases are only shown in long-living animals like dairy cows. Enzymes of liver and muscles are influenced. All investigated cows had lacks of trace elements, especially Zn and Co. Using of glyphosate based herbicides in agriculture have to be reduced medium term. In a long term other agricultural methods have to be developed to ban such toxic substances.

(8) (USA) Stephanie Seneff

Presentation Title : GM Roundup Ready Soy: Implications for Autism, Infertility and Parkinson's Disease



Email: seneff@csail.mit.edu

Introduction

Dr. Stephanie Seneff is a Senior Research Scientist at MIT's Computer Science and Artificial Intelligence Laboratory in Cambridge, Massachusetts, USA. She has a Bachelor's degree from MIT in biology with a minor in food and nutrition, and a PhD in Electrical Engineering and Computer Science, also from MIT.

She is an author of more than 150 peer-reviewed journal and conference proceedings papers. Until 2007, her research is mostly related to speech and natural language processing by computers.

Over the past several years she has focused on the application of computer science and natural language processing techniques to analyze the biology research literature and available online patient-provided prescription drug side effect reports and vaccine adverse reactions, and this effort has resulted in about a dozen recent papers published with international collaborators in medical and biological journals.

Her recent research has focused on understanding the effects of certain environmental toxicants -- especially aluminum and glyphosate -- on human physiology. She proposes that a low-micronutrient, high-carbohydrate diet, combined with excess exposure to environmental toxicants, and insufficient sunlight exposure to the skin and eyes, play a crucial role in many modern conditions and diseases, including heart disease, diabetes, arthritis, gastrointestinal problems, Alzheimer's disease and autism.

Together with Anthony Samsel, an expert on environmental toxicants, she has published two recent papers on the insidious adverse effects of glyphosate, the active ingredient in the pervasive herbicide, Roundup, on human health.

Dr. Seneff is a Fellow of the International Speech Communication Association (ISCA), and in 2012 she received the Integrity in Science Award from

the Weston A. Price Foundation.

Abstract

Many health issues are increasing at an alarming rate in countries around the globe following the adoption of a diet predominantly consisting of processed foods derived from GM Roundup Ready corn and soy. In this presentation, I will provide evidence that the pesticide residues, particularly glyphosate, and the processing chemicals, particularly hexane, in soy foods are causative in the epidemics we are seeing in China in autism, infertility and Parkinson's disease. I will discuss how glyphosate's known toxicological effects can account for many features in autism. I will present evidence that glyphosate disrupts bile flow, leading to toxic accumulation of metals like arsenic and manganese. Arsenic working synergistically with glyphosate is likely causing kidney failure among agricultural workers, whereas similar manganese dysbiosis is causative in Parkinson's disease. Hexane residue in processed soy products likely enhances glyphosate's toxicity due to a surfactant effect. I will present several graphs showing striking correlations among glyphosate usage, oil consumption, and various modern diseases and conditions. This study especially shows that adding *chemical extracted GM soybean oil and soybean protein powder* to infant formula milk powder products causes most serious harm to infants' health.

(9) Henry Rowland, UK

Title: The Global GMO Free Coalition and Global Interest in Safety of Glyphosate-Based Herbicides



Email: horowlands@gmail.com

Introduction

Global GMO Free Coalition Coordinator and Director of Sustainable Pulse

(www.gmofreeglobal.org) (www.sustainablepulse.com)

Henry was brought up on a family run organic sheep farm in the Pembrokeshire National Park in Wales. His connection to both organic farming and the protection of the Welsh countryside led to a deep interest in issues related to GMOs and their related pesticides from a relatively young age.

One of the first GMO Free public pressure groups in the World – GM-Free Cymru- was co-founded by Henry's mother in the 1990s. GM-Free Cymru (GM Free Wales translated from Welsh) has successfully kept GM crops out of Wales to this day.

Following work as a Journalist in Bulgaria, Henry moved on to set up one of the World's most successful Sustainable Agriculture online news sources, which focuses on GMOs and pesticides. **Sustainable Pulse** now has a regular readership of over 200,000 people per month from over 115 countries.

Sustainable Pulse provides the general public with the latest global news on GMOs, Sustainable Food and Sustainable Agriculture from a network of worldwide sources.

Sustainable Pulse is also involved in a number of reference projects – all of which have the aim of educating the public on the possible harm caused by GMOs and their associated pesticides. These include GMO Evidence (www.gmoevidence.com), which is an online library of scientific research from around the World.

In 2014 Henry coordinated the formation of an expert group of leaders from across the World – creating the **Global GMO Free Coalition**.

The **Global GMO Free Coalition** brings together over 100 organizations from 6 continents with a total partner membership of over 4.5 million people.

The **Global GMO Free Coalition's** (GGFC) intention is not to replicate the work of others, but to create partnerships that will enhance our collective influence.

Following the best practises of the Global Anti-Nuclear Movement, the Deep Sea Conservation Coalition and the Elders, the GGFC will provide much needed global coordination to counteract the misguided media arguments of the biotech industry regarding GE Crops and their associated pesticides.

The GGFC will also create real change, both in public and government circles, on the important issues surrounding GMOs, by putting the correct experts in the correct places at the correct times!

Abstract

a) How the Global GMO Free Coalition aims to change how GMOs and Pesticides

are reported in the global Mainstream Media

b) How the Global GMO Free coalition aims to help independent experts reach the public with their information

c) Why women across the World should take notice of how much Glyphosate is found in their Breast Milk. Suggestions as to what action needs to be taken to protect women globally.

d) Report on the UK meeting of the All Party Agroecology Group (APPG) in the Houses of Parliament – ‘Rounding up Glyphosate – is it really safe?’

(11) Gottfried Glockner, German Dairy farmer, Wölfersheim / Wetteraukreis / Hessen / Germany

Title: Bt Maize in Germany: Experience in Growth and Consumption

Abstract:

Symptoms

After feeding dairy cows with GM Bt corn feed: White / grey sticky diarrhea; Water accumulation in the joints; Udder edema; Blood vessel enlargement; Blood in the milk; Dry, brittle Udder- / teet skin; Cow mouth light pink; Cows very susceptible to illnesses; Unusually high number of deaths; Abnormalities with the animals.

Testing and analysis results:

After massive problems in the dairy herd, all feed was thoroughly tested:

- Studies of the amino acids revealed variations in Bt 176 grain of minus 24%, in Bt 176 silage minus 8.8%, compared with conventional starting line;
- Studies of Bt toxin revealed 8.300 ng/kg in silage after 1.5 years storage
- Detection of RR and Bt constructs in milk

Development:

After stopping feeding with Bt corn silage, the herd improved. but the impact can be felt to this day !

Prospects:

- No Bt corn cultivation since 2002
- Bt 176 now has no valid permit for release into the environment
- Bt176 isn't substantially equivalent to conventional corn !
- Questionable Safety Testing
- Questionable License Approval Process
- With manure spreading, Bt toxin was spread

- Bt toxin found on pasture and grassland
- Bt toxin also found in grass silage
- Massive diarrhea symptoms in animals within 12h after grass consumption

Session 3: Life Science Principals & GMO Technology Morning, 26th July 2014

Convenor: Yun Shan, China Development Strategy Research Society
Committee of Cultural Strategy
Prof. Gu Xiu-lin, Yunnan Financial & Economics University Social &
Economics Behavior Research Center

Speakers, presentation and sequence

1. I. V. Ermakova, Doctor of Biology, International expert on food and ecological safety; Institute of Higher Nervous Activity and Neurophysiology of Russian Academy of Sciences

Title: Experimental Evidence of GMO Hazard

2. Michael Antoniou, PhD, King's College London School of Medicine; Head of Gene Expression and Therapy Group.

Title: Glyphosate: are regulatory set exposure levels safe?

Presently approximately 80% of genetically modified (GM) crops grown globally (mostly in North and South America) are engineered to tolerate being sprayed with glyphosate-based herbicides, such as Roundup. Thus exposures to glyphosate-based herbicides have increased dramatically since 1996 when these so called Roundup Ready GM crops started to be grown commercially. Levels of exposure to glyphosate; that is, the acceptable daily intake (ADI), which regulators say is safe to consume, varies around the world. Within the European Union and Australia it is currently 0.3mg/kg/day (milligrams per kg body weight per day); in the USA the ADI is 1.75mg/kg/day whilst in China it is between these values at 1mg/kg/day. However, are these regulatory set limits of glyphosate exposure safe? This presentation will discuss the evidence and assumptions behind these regulatory set limits of exposure. In particular data showing that glyphosate can act as an endocrine disruptive chemical (EDC) in multiple hormonal systems (such as retinoic acid, estrogen) will be presented, properties currently not taken fully into account by regulators. Increasing evidence shows that glyphosate can potentially act as an EDC at very low amounts, which calls into question the safety of the regulatory set limits of exposure. Worryingly, the range at which glyphosate can act as an EDC is what can be found in

the human population. These developments argue for an urgent review of the limits of exposure to glyphosate by regulators.

3. Eva. Sirinathsingh, PhD, *Institute of Science in Society, London, UK.*

Title: The paradigm shift from genetic to epigenetics and its implications for GM crops utilising RNAi technologies

The gene-centric view of evolution and organism function has long dominated western biomedical sciences, influencing scientific philosophy, the pursuit of medical treatments, societal policies and attitudes, as well as the rationale and acceptability of novel biotechnologies such as genetically modified crops. However, the emerging field of epigenetics not only questions the ideological basis of the gene-centric view of biology, but also the safety and utility of genetically modified crops, especially new varieties that utilise RNAi technologies. These technologies have the potential to cause known as well as unpredictable risks to human health.

4. Zhou Zewei, Researcher, (Beijing) Concorde Medical College

Title: Health Hazard of GM Soy Cooking Oil

5. Robin Mesnage, PhD, King's College London, UK

Title: Assessment of health effects of pesticides residues in GMOs: A focus on adjuvants

6. Peter Saunders, Institute of Science in Society, King's College London

Title: The Sparc: An Independent Voice for Scientists

Abstract:

Independent scientists have always had problems both in carrying out their research and in having their results published. The difficulties have now greatly increased because corporations are putting more and more effort into obstructing research that they see as being likely to affect their profits. The Sparc is a new database that makes it easier for independent scientists to communicate with the scientific community, with the public, and, most importantly, with each other.

7. Ana Broccoli, Ag. Eng. (Ms Sc), Liliana Esther Maldonado, Medardo Avila Vazquez

Free Chair of Family Farming and Food Sovereignty; Faculty of Agricultural Sciences, Universidad Nacional de Lomas de Zamora, Argentina

Title: ORIGINS, IMPACTS, STRUGGLES AND CURRENT DISPUTES OF THE AGRO-INDUSTRIAL MODEL IN ARGENTINA: A SYSTEMIC VISION

8. MIGUEL ANGEL FERNANDEZ, Chairman, Association of Development, Argentina

Title: Organized Family Farming

9. LILIANA MALDONADO, Farmer, 21 years old, EL BRETE, Argentina

FROM THE YOUTH: BEING YOUNG AND WILLING TO FIGHT FOR A FAIRER WORLD.

10. Arnaud Apoteker, GMO Advisor

The Greens | European Free Alliance in the European Parliament

Title: Civil Society and Stalling of GMOs in the EU

11. Tung-Jye Wu, Green Formosa Front

Title: Non-GMO Movement in Taiwan

12. Zen Honeycutt, Founder & Director, Moms Across America

Title: The Impact of GMOs/Glyphosate on American Children and What We Can Do About It



Email: zenhoneycutt@gmail.com

Introduction

Education:

Parson's School of Design Bachelor's of Fine Arts, Landmark Curriculum for Living, Choate Rosemary Hall

Work:

Founder and Director of Moms Across America 2012-present

Owner Zen's Purple Garden 2005-2012

Fashion Designer from 1999-2005 in NYC, Montreal, LA with dollhouse, Jou Jou, Le Chateau, Fossil, Earl Jeans.

Abstract:

Mother's perspective and role in this cause. Glyphosate testing and breast milk finding. Moms Testimonials. What can we do? Shopping. Eating. Activism

Collateral Damage: Statistics of the Proposed Impact of Pesticides on Our Food by Moms Across America

Studies show glyphosate destroys gut bacteria. Illnesses today in America associated with the gut bacteria being damaged. 150 America children die each year from peanut/food allergies =3000 children. Hospital records show a 79% increase in diagnosis of children with Crohn's disease in the past 10 years since the majority of pesticides have been introduced. Damaged gut means inability to produce

serotonin, which regulates insulin. Diabetes =**25.8 million** people in 2011 alone. Damaged gut bacteria means an inability to create tryptophan and therefore melatonin. Lack of sleep, combine with lack of serotonin can lead to depression, mental illness m bi polar and acts of violence. America is the most highly drugged population in the world and has a school shooting every other day.

Studies show glyphosate is an endocrine disruptor.

The United States is #1 for infant death on day one. The USA has a 30% failure to conceive rate in young couples, nearly = **2 million** babies lost each year

Studies show a gut brain connection. 20 years from now, 1 out of 2 of our children will be diagnosed with Autism if we continue at the current rate.

Alzheimer's increase- **5 million** currently, every 67 seconds someone dies of Alzheimer's

Studies also show that glyphosate breaks down the blood brain barrier, allowing toxins into the brain. This may very well account for why doctors did not see a "flood of children with autism," despite mercury being in vaccines since 1929, until the late 1990's when GMOs and glyphosate were allowed into our food. Cancer is the number one killer of children in America today. 1 out of 2 of our children have some form of chronic illness in America today. Nearly 200 million USA chronically sick children and adults with cancer, diabetes and Alzheimer's.

Session 4: Sustainable Agriculture Afternoon, 26th July 2014

Convenor: Prof. Gu Xiu-lin, Yunnan Financial & Economics University Social & Economics Behavior Research Center
Chen I-wan, Advisor, Committee of Disaster History to China Disaster Prevention Association; Advisor.

Speakers, presentation and sequence

1. Robert Allen Streit, Crop consultant, agronomist
newspaper column writer

Title: 'Soil Remediation Work' Field Trials, Facts, Unknowns

Abstract #2

As lab instrumentation improves more foods and liquids will get analyzed for pesticide contaminants for people interested in knowing what they are consuming. This information will get correlated with the increasing volume of medical research documenting how those contaminants negatively human health. There is then going to be an increased need to develop attainable programs to remediate the soils in several countries. The sampling and analyses done so far has confirmed peoples' suspicions that contamination is occurring in more foods and at higher levels than disclosed in any report to the public in many countries. The findings will generate questions as to where in the production process the contamination is occurring, what means are there of avoiding the problem and then finally create a discussion as to the overall solution.

There are many different pesticides used around the world. These include herbicides, insecticides, nematicides and fungicides. The efficacy of each is often dependent on several factors and is typically expressed in terms of LD50, which is the lethal dose needed to kill fifty percent of the target population. Another important factor is how long the product (s) persists in the environment. Ag producers and pesticide companies typically desire a long period of activity. This same trait can cause problems if the product lasts too long and affects follow crop or can bio-accumulate across several seasons to cause problems.

In the case of glyphosate, studies have been done at the University of Hohenheim in Stuttgart, Germany. In those studies they found that the product is tied up quickly, as the advertising states, but it does not disappear. Instead it is sequestered onto the

clays and organic matter at rates dependent on clay content and soil pH. At Hohenheim University researchers established a half life of eight to twenty two years. This means glyphosate can enter the plant in the application year or in previous year's application. This could be many years after glyphosate may have been applied to the soil. The release from the soil is often dependent on application of a phosphorous fertilizer.

What is needed is a large scale testing program to determine what microbial mix or mixes prove capable of degrading glyphosate or other problematic pesticides. In the past it was known that glyphosate and AMPA, its primary metabolite, were difficult to degrade due to its anti-microbial properties. Such information will then be supplied to growers wishing to decontaminate soils that could then grow Ag crops free of glyphosate contamination. This program can be utilized after credible microbial degrading compounds from different companies or research groups have been identified and forwarded to the research teams. Once the performance data is released the degradation team can decide the companion products to add to act as synergists or accelerants in the clean-up programs.

2. Claire Bleakley, R.C. Hom, BSc/Psyc, Dip Herb
GE Free NZ in Food and Environment

Title: GM Animal trials in New Zealand

3. Brendan Hoare, Organic Systems Ltd
www.organicsystems.co.nz

Title: Finding Common Ground: Active solutions for people, produce and planet

Abstract: It is a wicked opportunity. Leaders accept the 'status quo' is unacceptable and the world begs for clean, safe, green food. Meanwhile New Zealand struggles with its identity (and responsibility), failing to seize the moment to be an action oriented hero for tomorrow's world. Solutions are on offer, but finding common ground requires an openness to change cultural attitudes, practices and beliefs. This presentation will explore how food production systems of all sizes can adapt their ways of thinking and operations to meet these demands. The presentation is based on findings and learning from a leadership role and research conducted as part of the 2014 UN International Year of Family Farming and other first-hand experience from NZ and around the world.

4. Jiang Gao-ming, Chief Researcher, Institute of Botany, China Academy of Science
Special invited professor, Institute of Botany, Shandong Provincial People's Government

Title: Hongyi Farm Eight Years Development Approach: Ecological Harmony & Agriculture Safety

5. Na Zhong-Yuan, Director, Institute for Ecological Research, Yunnan
(Presented by Yang Hong-jun, Deputy Director)

Title: Never stop Explore the Nature Only for the Good of Mankind

6. Roberto Ugás, Universidad Nacional Agraria La Molina, Peru
International Federation of Organic Agriculture Movements, IFOAM
rugas@lamolina.edu.pe

Title: Agroecology and food security in the Andes Insights from a research project on Ecological and socioeconomic intensification of smallholder agriculture (Canadian International Food Security Research Fund) or GMOs are not a sustainable option

Abstract

The presentation will provide practical examples on how the AGROECO project has approached the connections between agroecology and food security in smallholder farming in the Peruvian high Andes, while presenting the main elements of IFOAM Position Paper on "The Role of Smallholders in Organic Agriculture". It will also explain the process that led to the declaration of a moratorium on GMOs in Peru.

The AGROECO Project: Ecological and socioeconomic intensification of smallholder farming in the Andes of Peru

In spite of high economic growth, poverty in Peru is almost three times higher in rural areas than in urban areas. Organic agriculture is often promoted as a sustainable way to increase overall farm performance, reduce poverty, mitigate climate change, and improve food security. However, without sound ecological, social, and economic research, organic farming will not unravel its full potential to improve farmers' livelihoods. This project, supported by the Canadian International Food Security Research Fund (CIFSRF), aims to increase the effectiveness of organic farming in two regions of the Peruvian Andes (Cusco and Cajamarca) known for their high biodiversity and active farmers' associations.

The project will improve farm productivity by enhancing ecological cycles and improving participatory plant breeding, placing value on indigenous crops and nutrition. Research will also focus on social processes, including innovation, traditional knowledge, and linkages between organizations, policy, and advocacy.

Finally, to help increase farmers' incomes and food security, this project will develop and enhance market access for organic products in the region.

IFOAM Position Paper: The Role of Smallholders in Organic Agriculture:

IFOAM recognizes the essential role of smallholders, especially in food production and sustainable rural economies but it is clear that many smallholders are very poor, disadvantaged and have insufficient access to resources and support. This has to change.

IFOAM recognizes that smallholders have a fundamental role in the stewardship of biodiversity and regards organic agriculture based on the scientific discipline of agroecology as the most appropriate way to achieve ecological, agronomic and socio-economic intensification of smallholder agriculture.

IFOAM recognizes that major efforts are needed to improve smallholder farm productivity and calls for a much higher investment in pro-smallholder science, technology, infrastructure, services and innovation.

IFOAM calls for improved local, national and international policies to promote sustainable organic smallholder systems and businesses.

7. By Séralini et al., 2012- 2014

Presented by: Nicolas DEFARGE

University of Caen, Institute of Biology, EA2608, CRIIGEN, and Network on Risk, Quality and Sustainable Environment MRSH

Title: Conflicts of interests, confidentiality and censorship in health risk assessment: The example of the fate of Long Term Toxicity of a Roundup Herbicide and a Roundup-Tolerant Genetically Modified Maize

Abstract

We have studied the long-term toxicity of a Roundup-tolerant GM maize (NK603), and of a whole Roundup pesticide formulation at environmentally relevant levels from 0.1 ppb. “Long-term toxicity of a Roundup herbicide and a Roundup-tolerant genetically modified maize” was published in *Food and Chemical Toxicology* (FCT) on September 19th, 2012[1]. The major findings were that:

- Roundup provokes severe hepatorenal deficiencies and sex-dependent hormonal effects such as mammary tumors from very low environmental levels (0.1 ppb);
- Comparable results have been obtained during chronic consumption of an equilibrated diet containing NK603. This was due to Roundup residues and to this specific genetic modification;
- Roundup formulations and Roundup-tolerant GMOs should be considered as endocrine disruptors and their present assessments on health are drastically deficient.

The first wave of criticisms arrived within a week, surprisingly, mostly from plant biologists. We answered all these criticisms[2]. The debate then encompassed scientific arguments and a wave of *ad hominem* and potentially libellous comments appeared in different journals by authors having serious yet undisclosed conflicts of

interests. In the same time, FCT acquired as new assistant editor for biotechnology a formal employee of Monsanto after he sent a letter to FCT to complain about our study. This is in particular why FCT asked for a *post-hoc* analysis of our raw data. On November 19th, 2013, the editor-in-chief requested the retraction of our study, which is completely unusual, and moreover recognizing it was not incorrect, that there was no misconduct, no fraud or intentional misinterpretation in our complete raw data. They argue that no conclusions can be drawn because we studied 10 rats per group over two years, because they were Sprague Dawley rats, and because we could not conclude on cancer. This was known at the submission of our study. Our study was however never intended to be a carcinogenicity study. We never used the word “cancer” in our paper.

After explaining the reasons that lead us to chronically assess this GM maize and Roundup as a formulation and recalling the main results of the article, the presentation will include a summary of the debate resulting in its retraction, as it is an historical example of conflicts of interests in the scientific assessments of products worldwide commercialized. We also show that the decision to retract cannot be rationalized on any discernible scientific nor ethical grounds[3]. Censorship on research into health risks undermines the value and the credibility of science, thus our paper should be republished.

8. Vandana Shiva, Director of Globalization Forum, Prominent social activist

Title: Sustainable Agriculture - The answer to world hunger, malnutrition and food hazards

9. Jeffrey M. Smith

Title: *Food Safety & Sustainable Agriculture Forum 2014 Summary*