



UNIVERSITY OF NAIROBI
SEED ENTERPRISE MANAGEMENT INSTITUTE (SEMIs) SHORT COURSES

2015 SERIES OF LECTURES, PRACTICALS AND FIELD TOURS

1. Seed Production
2. Seed Drying, Processing and Storage
3. Seed Business
4. Seed Marketing
5. National Plant Protection Organizations (NPPOs) and Seed Quality Regulators
6. Seed Production Field Diagnostics
7. Seed Quality Assurance and Seed Quality Management

Compiled By:

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Acknowledgements:

School of Business, University of Nairobi

Seed Centre, Iowa State University

CYMMIT, Zimbabwe

International Consultants – Aline, F. O'Connor, Dilip Gokhale

KALRO

KEPHIS

Seed Companies: Kenya Seed, Leldet, Drylands Seed

University of Nairobi Library – Mugo, H. and Mioru, G.

SEED ENTERPRISE MANAGEMENT INSTITUTE (SEMIS)

OVERVIEW OF SEMIS TRAINING MODULES

Mwang'ombe, A. W., Olubayo, F. M., Njoroge, K.



IOWA STATE UNIVERSITY



Project Implementation

Alliance for a Green Revolution in Africa-AGRA

Total funding:4,495,432.00 USD

Phase 1: 3 years (2010-2013),Phase 2-2014-2016

Institutions

University of Nairobi

PI: Prof. A.W. Mwang'ombe

Management: Prof. F. Olubayo, Prof. Kiarie Njoroge

Daniel Wasonga –Project Manager, Florence Kiwunja-Admin. Asst.,

Francis Maina, Caroline Ndumi, B. Kirangu -Field Assts

CIMMYT:

Dr. John
MacRobert
(Author-Seed
Business Mgt In
Africa)

KEPHIS:

DR. Esther
Kimani-
Director
KEPHIS
Mr. Kibet

KARI:

Dr. Riungu
and Dr.
Ragwa

Consultants

Aline O'Connor
Funk
Paul Seaward
Paul Okete

ISU

Dr. Misra
Dr. Y. Shyy
Dr. Joe Cortes
Dr. Mike Stahr

SEED ENTERPRISE MANAGEMENT INSTITUTE (SEMIs)

Overall Goal

- Eradication of food and nutrition insecurity through capacity building of seed actors .
 - quality seed
 - affordable seed

Objectives:

1. To produce seed production and marketing management expertise in SSA region
2. To train seed industry practitioners on the best practices to efficiently produce adequate high quality seed for farmers.



3.To enhance production of seed of improved varieties for the SSA

- Efficient production
- Marketing
- Good distribution

4. To strengthen the capacity of the SSA region to train on seed production and marketing management strategies

- Enhanced technology

5.To develop a regional capacity to facilitate information sharing on seed issues and related disciplines in SSA.

Growing the Seed Industry in Africa

SEMI's PARTNERSHIPS



agra-alliance.org



cimmyt.org



kephis.org



uonbi.ac.ke



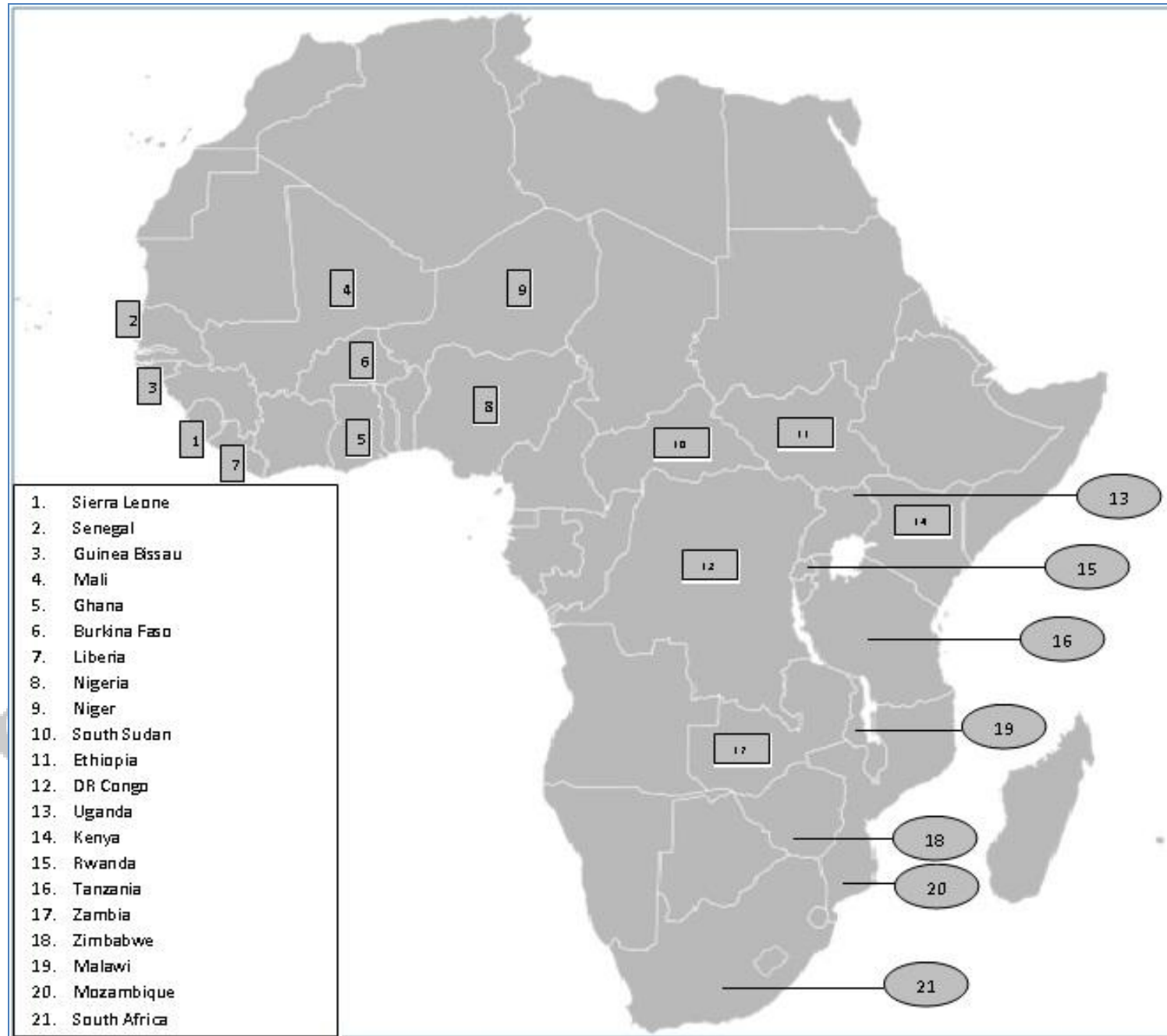
iastate.edu



kenyaseed.com

GROWING THE SEED INDUSTRY IN AFRICA

SEMIs in 21 African Countries!!!





SEMIs COURSES AT UON:



Course	Collaborators	Coordinators
Seed production	UoN, CIMMYT, KEPHIS, KALRO, Leldet seed co.	Prof. Kiarie Njoroge/ Prof. Olubayo
Seed drying processing and storage	UoN, ISU, KEPHIS, KALRO, Kenya seed Co.	Dr. Onyango Mbunge, Prof. Kiarie Njoroge, Prof. Olubayo
Seed marketing	UoN (sch of Bus), Aline O'Connor, Kenya seed Co.	Dr. Justus Munyoki, Prof. Kiarie ,
Seed Business Mgt.	UoN (Sch. Of Bus.) Aline O'Connor, Kenya seed Co.	Prof. Evans Aosa, Prof. Olubayo, Mr. Herick ondingo
Seed Quality assurance and Seed Enterprise Quality Management	UoN, ISU, KEPHIS, KALRO, Kenya Seed Co.	Prof. Olubayo, Prof. Muthomi, Prof. RD. Narla,
Seed Production Field Diagnostics	UoN, KEPHIS, KALRO, Kenya Seed Co.	Prof. Olubayo, Prof. Muthomi/Prof. Narla/Prof Mwang'ombe
National Plant Protection Organizations (NPPO)	UoN, KEPHIS, KALRO, Kenya Seed Co.	Prof. Kiarie, Prof. Olubayo

SUMMARY OF TRAINED PERSONNEL IN PHASE I – 2010-2013

Course	2010	2011	2012	2013	Total Per Course
Seed Production	29	27	30	0	86
Seed Drying Processing and Storage	31	28	30	0	89
Seed Business Management	29	26	29	25	109
Seed Marketing	28	25	30	27	110
Seed Quality Assurance	30				30
Seed Legislation and Accreditation	25				25
Seed Quality Assurance and seed Enterprise Quality Management		26	29	0	55
Total(Yearly)	172	132	148	52	504

SUMMARY OF TRAINED PERSONNEL IN PHASE II – 2014-2016

Course	2014	2015
Seed Production	23	26
Seed Drying Processing and Storage	23	25
Seed Business Management	19	30
Seed Marketing	20	31
Seed Quality Assurance and seed Enterprise Quality Management	19	30
National Plant Protection Organizations and Seed Quality Regulators	21	24
Seed Production Field Diagnostics	18	24
Total(Yearly)	143	190



Seed processing and drying



Seed production



Seed Marketing

Long Term courses in Seed Technology and Business:

Curriculum already in place for:

- I. Certificate-Seed Technology and Business
- II. Diploma -Seed Technology and Business
- III. Post-graduate Diploma-Seed Technology and Business
- IV. MSc.-Seed Technology and Business



15 Students have enrolled for the MSc. Seed Technology and Business program

SEMI's Curricula

- Involvement of stakeholders in the development;
- ISU, Consultants, CIMMYT, UON, KARI, Seed Companies
- Annual Review every year to keep abreast on seed issues and changing trends in the seed industry

Result



One of the best “thought-through” and relevant curricula in Africa focused on seed



World Class Facilitators:



John MacRobert-
CIMMYT



Kiarie Njoroge-UON CAVS



Jenny Leakey-Leldet



Dr. Yuan Shyy-ISU



Aline O'Connor –Seed
Business mgt



Dr. Joe Cortes-ISU



KEPHIS

TRAINED PERSONNEL ARE A GREAT ASSET FOR SEED COMPANIES:

The training at SEMIs is helping Scaling up production of high quality seed for farmers around Africa



Dry Land Seed co.

So far over 100 seed companies from 21 African Countries have benefited from training at SEMIs

Other Activities at SEMIs:

Foundation seed production at CAVS:

Varieties:

- Meizi mbili
- Kenya Wonder
- Kenya Red Kidney
- Kabete Super
- Kenya Sugar Bean
- Super Rosecocco



Provision of foundation seed for seed co.

White label seed produced at SEMIs

Year	Tonnage	Variety
2013	1.76 tonnes	Kenya Red Kidney, Meizi Mbili
2014	4.3 tonnes	Kenya Red Kidney, Kabete Super, Miezi Mbili



“Seed companies all over Africa indicate foundation seed availability and access as a major contributor to low seed production”

Presentation of White label breeder seed to Kenya seed company CEO. Mr. Soi at a ceremony at CAVS

Phase 1: Seed Processing Unit

Construction of Seed processing factory is complete. The factory to process over 5000 MT of seed



- Installation of seed processing machines ongoing.
- Expected handover date- Early August 2015





PHASE II: LABORATORY CONSTRUCTION

- Construction of seed laboratories is ongoing- 90% is complete
- Painting works and fittings ongoing with expected handover – End September, 2015



Participation in National and Regional Workshops and Meetings on Seed Issues



Agricultural Sector Development forum- Kibaki in attendance



Kenya-Agricultural transformation Day in Nairobi

Other meetings	Year
FARA Meeting	2011
KARI congress	2012
STAK congress	2013
ASK Show	2014



H.E. Mohamed Shein Pres. Of Zanzibar at the AFSTA-Congress Zanzibar

SEMIs at the ASK show in Nairobi



Rosebenna from SEMIs talks to farmers on the New Bean Varieties

SEMI is a point of call for seed companies:



- Agricultural /Seed Institutions are using SEMI as a point of call during meetings and visits

- Point of reference for seed trends.

- Need to platform this to become the leading seed reference point in Africa

Seed company personnel with STAK officials call in at SEMI

Highlights ..



Experiential training-Visit to the seed industry



Training on Finance and capital Acquisition:
-Root capital and ASIF funding
Experts at SEMIs

Collaboration with Stakeholders and Experts:



Dr. Julius Kipng'etich-Director, Kenya Wildlife Services (KWS)

Guest lecture at the seed business module course

Observed Changing trends in the Seed Industry in Africa.....

“as I move across Africa, I see African Farmers have changed their strategy to improved seed”

Dr. Joe DeVries-Director, PASS



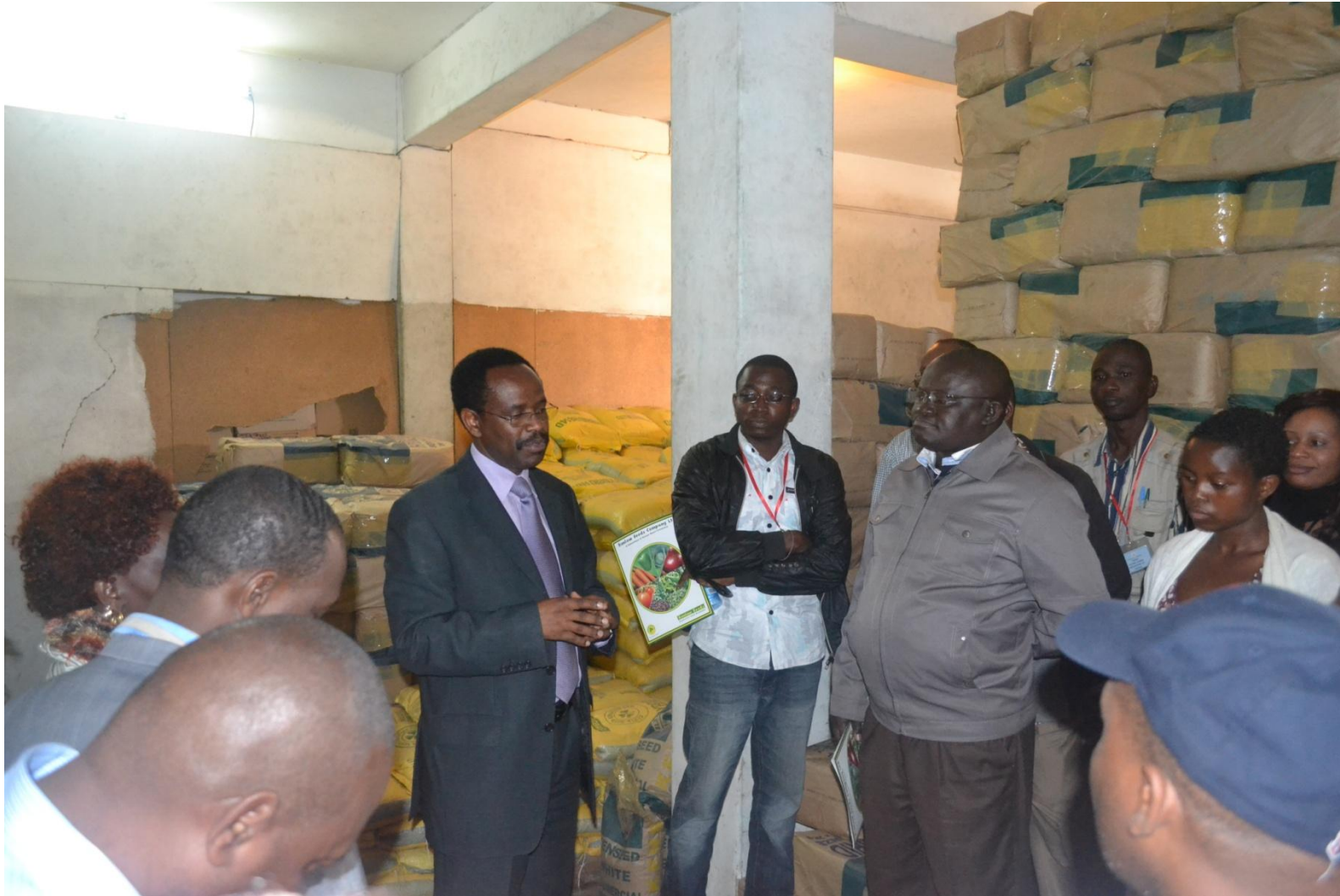
Highlights contd:

Seed Production May 2012:

Visit to KARI Wheat Rust Resistance Breeding Station-Njoro



Seed Marketing Course-July 2012



Participants with the MD-Simlaw Seed company Mr. Soi

Seed Business Management-2013



Visit to Dry land Seed company seed store in Machakos

Seed Processing Course 2014



Familiarization with Certified seed packaging at a seed company in Kenya

Working with consultants to enhance capacity Building



Seed Business Class with Dilip Gokhale

Graduation –Certificate presentations:



Joe DeVries-Director Pass presents certificate and books to participants



Prof. Mwang'ombe-SEMI's PI presenting a certificate to Janet Gyima from Ghana

Rewarding our Participants with certificates at the end of each course motivates them to be better “seed men”

Comments from Participants:

*“I like every topic we did in this course especially seed certification and de-taselling “
Anonymous .*



*“The knowledge I have acquired through the course will be highly valued not only in our seed company but in the whole of Zambia”
Dorica Banda
Indigenous seed company Zambia*



*“Previously I did not know how to project seed requirements and coordinate backwards for procurement of basic, pre-basic seed...” Now I know”
Mr Omari Mduruma-
Aminata seed company
Tanzania*

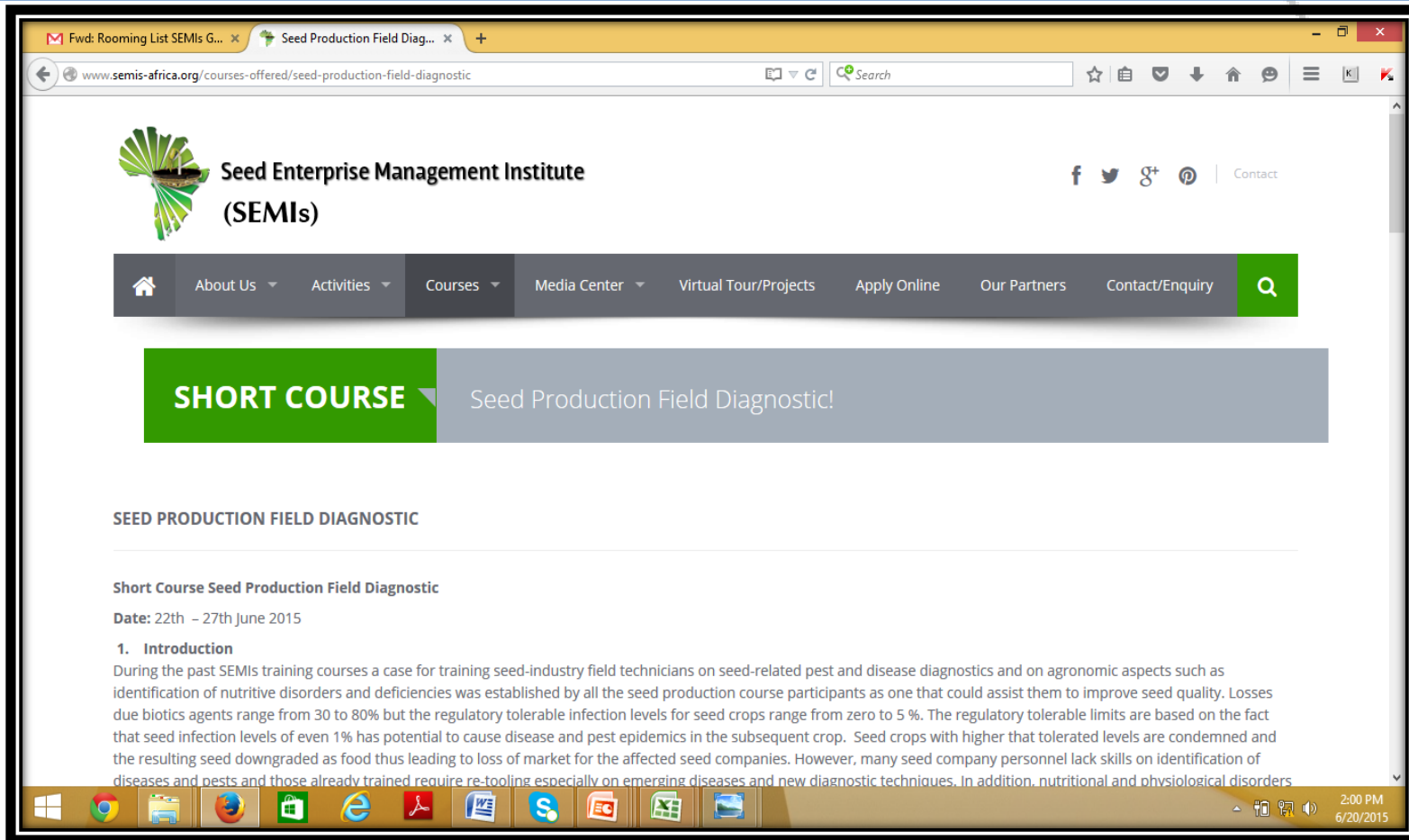
Monitoring and Evaluation:

A monitoring and Evaluation team from AGRA visited SEMIs on 19th February 2012 to assess the project



SEMIs Website:

www.semis-africa.org



The screenshot shows a web browser window displaying the SEMIs website. The browser's address bar shows the URL www.semis-africa.org/courses-offered/seed-production-field-diagnostic. The website header features the SEMIs logo (a stylized green fan) and the text "Seed Enterprise Management Institute (SEMIs)". To the right of the logo are social media icons for Facebook, Twitter, Google+, and Pinterest, along with a "Contact" link. Below the header is a navigation menu with items: Home, About Us, Activities, Courses, Media Center, Virtual Tour/Projects, Apply Online, Our Partners, and Contact/Enquiry. A green search icon is also present. A prominent green banner reads "SHORT COURSE" followed by "Seed Production Field Diagnostic!". Below this, the page title is "SEED PRODUCTION FIELD DIAGNOSTIC". The main content area begins with the sub-heading "Short Course Seed Production Field Diagnostic" and the date "Date: 22th – 27th June 2015". The first section is titled "1. Introduction" and contains text about the course's purpose: "During the past SEMIs training courses a case for training seed-industry field technicians on seed-related pest and disease diagnostics and on agronomic aspects such as identification of nutritive disorders and deficiencies was established by all the seed production course participants as one that could assist them to improve seed quality. Losses due biotics agents range from 30 to 80% but the regulatory tolerable infection levels for seed crops range from zero to 5%. The regulatory tolerable limits are based on the fact that seed infection levels of even 1% has potential to cause disease and pest epidemics in the subsequent crop. Seed crops with higher that tolerated levels are condemned and the resulting seed downgraded as food thus leading to loss of market for the affected seed companies. However, many seed company personnel lack skills on identification of diseases and pests and those already trained require re-tooling especially on emerging diseases and new diagnostic techniques. In addition, nutritional and physiological disorders". The Windows taskbar at the bottom shows the date and time as 2:00 PM on 6/20/2015.

- Sharing information on seed issues, current happenings in the seed industry in Africa
- Staying in touch with SEMIs participants
- Online registration of Students



**Thank you for
your attention**



NATIONAL PLANT PROTECTION ORGANISATIONS (NPPOs) AND SEED QUALITY REGULATORS

SEMI - UON