



# VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008

## The VEF Alumni Conference “Opportunities and Challenges”

December 12, 2008

Dr. Xuyen Ngo Thi – Lecturer/Researcher on Plant  
Pathology and Nematology  
Hanoi University of Agriculture  
VEF Visiting Scholar 2007  
Completed academic program on Sep. 01, 2008





## **VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008**

**Research and Training at the Plant Transformation  
Research Center, UCR (Sep. 01, 2007-Sep. 01, 2008)**

**Completed research in Molecular Biology and Plant Transformation.**

**Training 10 days and have given seminars at the UC R, Uni. of Florida  
Attended a 2 day workshop at the University of California Davis.**

**Attended a day meeting at the California Division of Agriculture  
for Asian Greening Disease on Citrus (Huanglongbing).**

**Attended the week seminar of Nematology and Plant Pathology seminars**

**Interacted very favorably with faculty, students, visiting scientists at UCR**



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**Author on two research presentations:**

- The 2008 World Congress in *In-vitro* Biology,  
Tucson, Arizona
- The Biology Conference in Merida,  
Mexico (Martha Orozco)

**A research result on the 'Characterization of *Ph. infestans*  
populations from Vietnam'**

**Published on Sep. 2008**

**Australasian Plant Pathology Society 2008**





## **VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008**

### **The goal to return to Hanoi Agricultural University:**

- Apply a proposal research at the Ministry of Education and Training for Transformation on tomato and other vegetables cultivars 2009-2010.**
- Testing with Vietnam climate for disease and insect resistant of transgenic Tomato cultivars from PTRC, UCR**
- Activity at the VEF Alumni Conference 12-13 Dec., 2008 in Hanoi. Mentor' lecture on Plant Pathology and seminars with Advanced Training Program students at Hanoi Uni. of Agriculture**



## **VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008**

- Built up research on Biotechnology and Plant transformation at Hanoi Uni. of Agriculture (HUA)

- Establish the team for Plant Transformation and selection rice drought resistance research- A proposal to apply for three year 2009-2011 of Government, to find funding for Agro-Biotechnology.

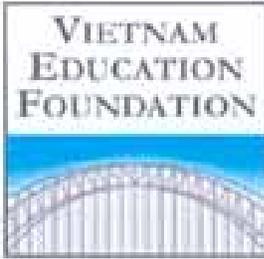
Contacted with Prof. Dr. Henry Nguyen at the Missouri. Uni.

- Will be training plant transformation technology to Plant Protection specialists and HUA students, M.Sc students.



## **VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008**

- Advisor for teaching courses of Education Training Program, contact with professional' lecturers from UC Davis and other Universities, VEFFA fellows and Visiting Scholars.
- Have invited Dr. Assoc. Prof. Huong Tran Nguyen UC State of Long Beach-teaching English Course for class of 52 and 53 Advance Training from 19 Dec.-19, 2008 Jan., 2009
- Trained the IPM research to Workshop on Opportunities and Challenges for Promotion and Sustainable Production and Protection of the Potato Crop in Vietnam and elsewhere in Asia  
(Dalat, Vietnam, 25-28 November 2008)



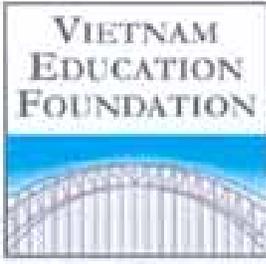
# VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008



IPM Potato Crop in Vietnam and elsewhere in Asia

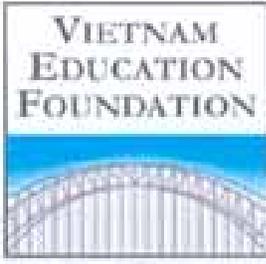


Dr. Xuyen Ngo Thi -Hanoi University of Agriculture  
VEF Visiting Scholar 2007



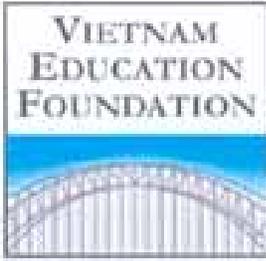
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**DECISION No. 79/2007/QĐ-TTg OF MAY 31, 2007, APPROVING  
THE NATIONAL ACTION PLAN ON BIODIVERSITY UP TO 2010  
AND ORIENTATIONS TOWARDS 2020 FOR IMPLEMENTATION  
OF THE CONVENTION ON BIOLOGICAL DIVERSITY  
AND THE CARTAGENA PROTOCOL ON BIOSAFETY**

**Prime Minister *NGUYEN TAN DUNG***





## **VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008**

**Convention on Biological Diversity Agricultural biodiversity conservation and development:**

- a/ To investigate, inventory and assess genetic sources of agricultural plants, livestock and microorganisms;**
- b/ To elaborate and implement a program on agricultural biodiversity conservation and development;**
- c/ To build up and apply conservation and development models for precious and rare indigenous plants and livestock;**
- d/ To apply advanced technologies, especially biotechnologies, to conserve and develop agricultural biodiversity**





## **VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008**

### **Agricultural biodiversity conservation & development:**

**To announce and complete a conservation system to efficiently conserve precious, rare, indigenous livestock breeds, plant varieties and agricultural microorganisms of high socio-economic value.**

**The Protocol on Biotechnology Research  
Between UC Riverside and  
Hanoi University of Agriculture**





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## “Opportunities and Challenges”

Expected outputs-The trainers of VS:

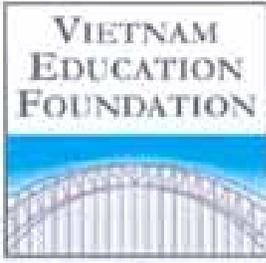
- Understand the importance as staple of relationship between US & VN
- Be able to identify opportunities and challenges for the high education to apply to Vietnam universities.
  - Understand the main new technology issues
  - Master the concepts and principles of research
  - Master the new techniques & Bio-technology at the research
- Find the research project of Biodiversity and plant genome research
- Experience how to develop training for Vietnamese team, particularly with regards to potential role that specialists and students can play in the new process.





## **VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008**

- VEF fellows make a bridge for relationship of research Vietnam-US
- To train new technology, good knowledge to specialists: Conducting research and teaching activities in Vietnam with new teaching methods and help to Vietnamese students' research and studies
  - Activity of Fellows and VS for teaching in Advanced Training Program at HUA and others University
- US Universities, VEF Providing guidance and help to Vietnamese students' research and studies, specially for Advanced Training Program
  - Government, MOET, VEF Promote professional and academic community level. & providing support to collaborative activities.



## **VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008**

### **Difficulties:**

**Difficiency in space to work and comprehensive equipments**

**Research projects with low funding.**

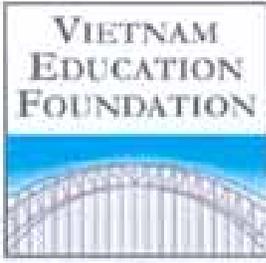
**Tattered research, difficult to publish**

**Specialists of the professional institute have no teaching at the  
University.**

**Lecturers teaching too much (1000 hours in school time) is obstacle  
to a researching career. Lecturers need to practise, reinforce one's  
good knowledge and new teaching method.**

**Credit courses for teaching is hardship in store**





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**Activities at HUA:  
Expand relationship  
with Vietnamese  
specialists of the world**

**Biotechnology  
Workshop at  
HUA 18 Oct., 2008**



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## Molecular Cancer Therapeutics

DNA/RNA Antisense Oligonucleotides  
Dr. Vũ Mạnh Huỳnh-UCS.Diego

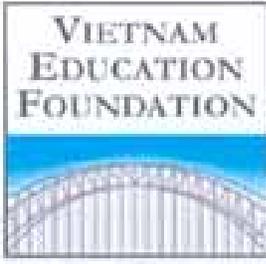
Dr. Nguyễn Trọng Bình, UCS.Diego

Ms Nguyễn Thị Quý, Australia

TS Liz Nguyễn, USA

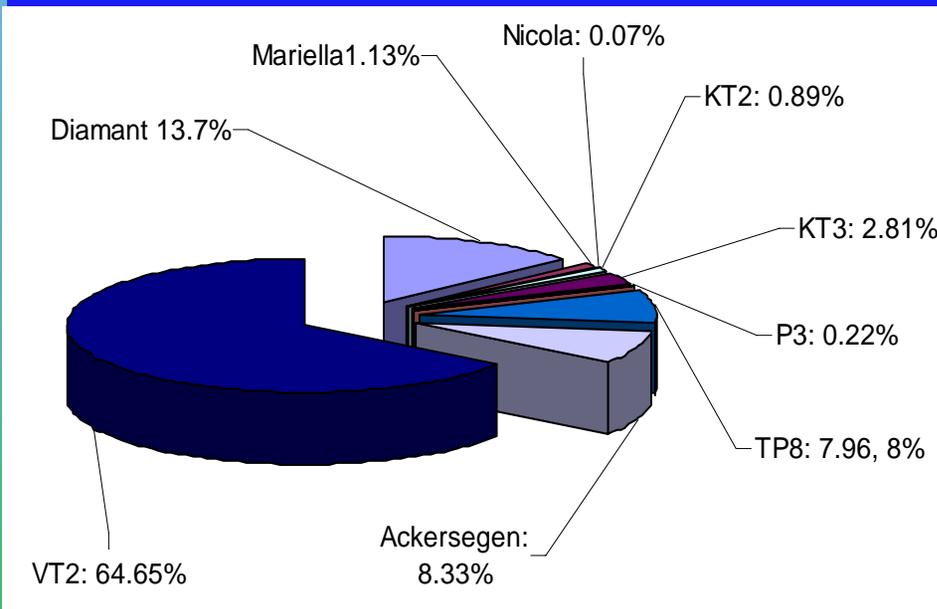
GS.TS. Ngô Kế Sương, VN

TS Lê Tiến Dũng, VN/USA



# VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008

## Potato cultivars producing at the Red River Delta



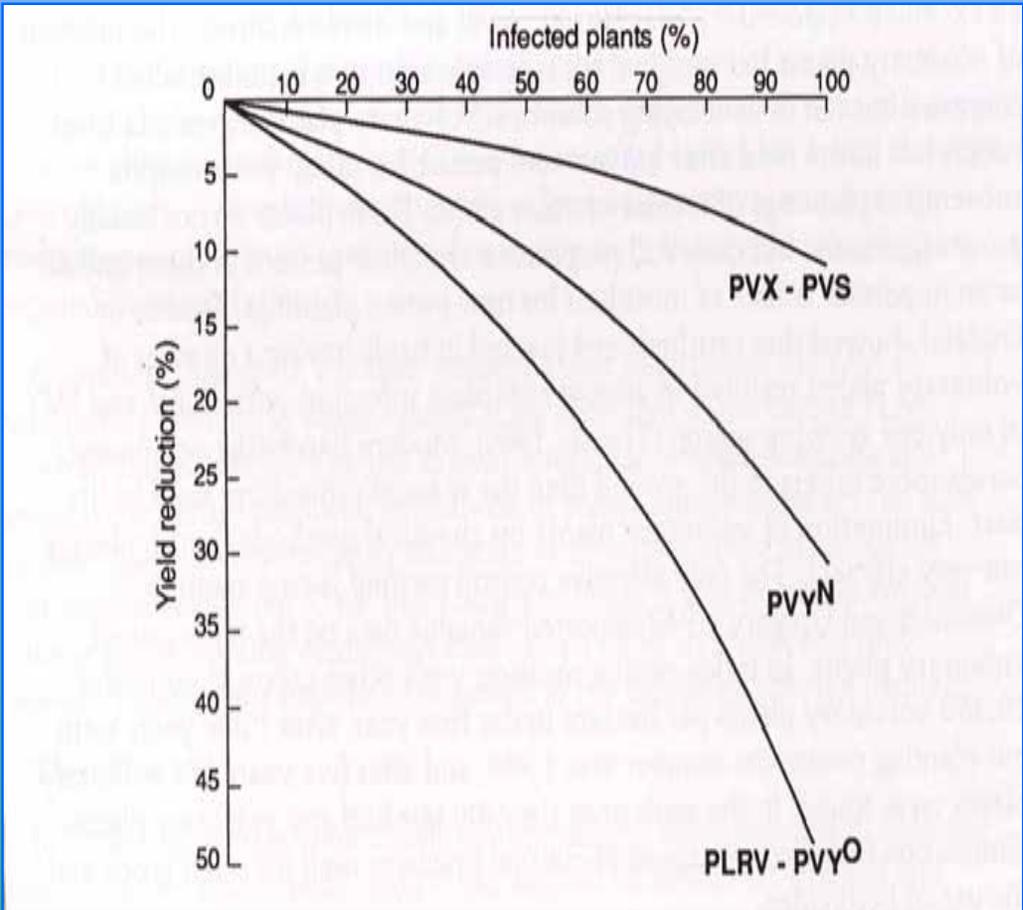
Trung Quốc: 65%

**Inner force research-  
Vietnam Government  
Research Funding:  
Biotechnology production  
for Potato resistant to virus  
diseases**

**Research of Agro-biology  
Institute, HUA**



# VIRUS disease and transmitting insects



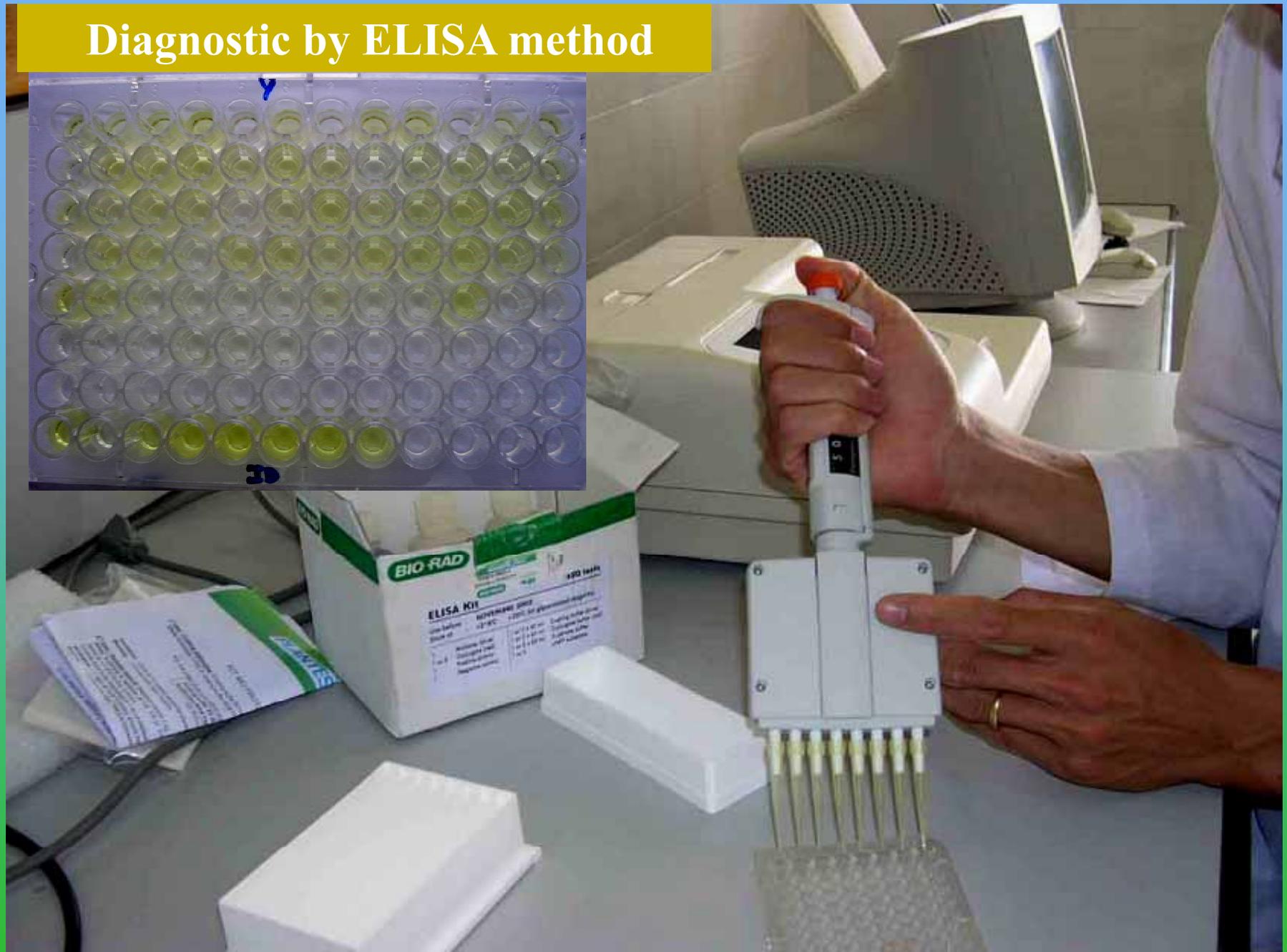
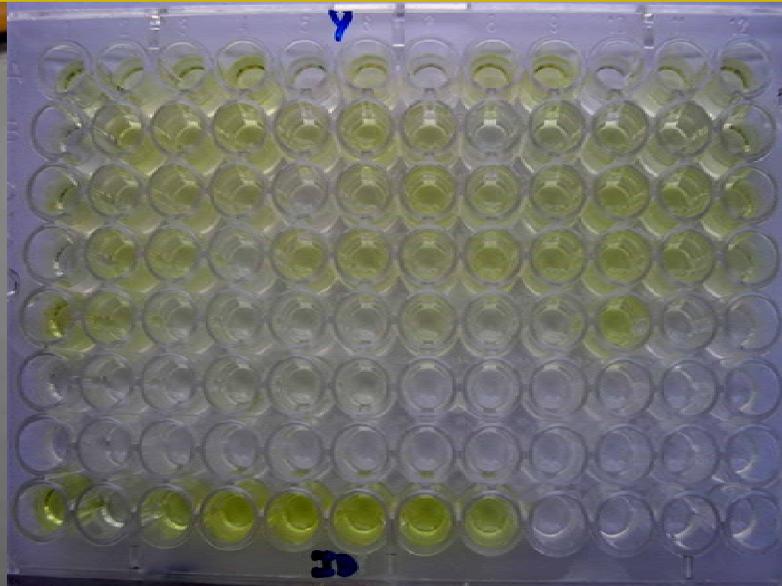
Correlation between virus disease and yield

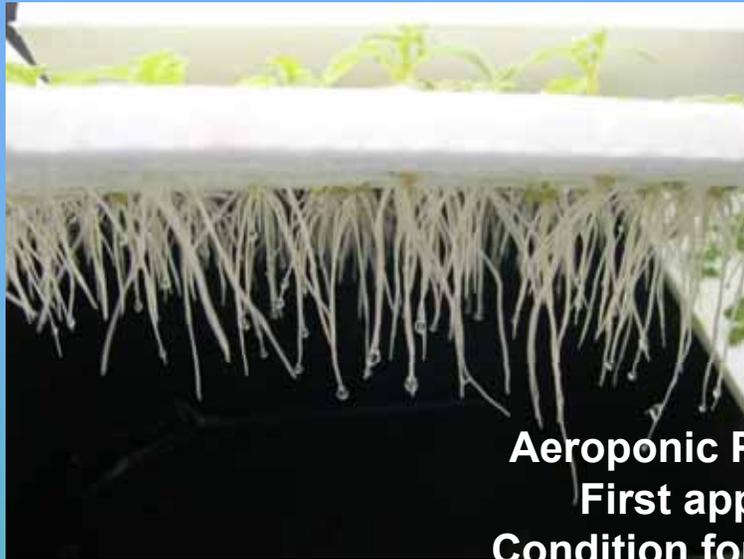


Fresh potato from in-vitro tip culture



# Diagnostic by ELISA method





**Aeroponic Potato Production**  
**First application in VN**  
**Condition for fresh of diseases**

**Manage the time for nutrient to the plant**  
**Decrease water for irrigation 98%,**  
**fertilizer 95%, Pesticide chemical 99%**  
**Seedling produce 10s compare with in-vitro culture**





**Compare: In-vitro-High price and can produce by support**

**New technology-use drop irrigation-making economic of water, no weed, low labor activities, easy to harvest.  
Grow up 20% yield tubers**







**Sapa**

**Nam Định**

**Thái Bình**



**Lạng Sơn**

**Hải Phòng**

**Bắc Ninh**

**Hải Phòng**

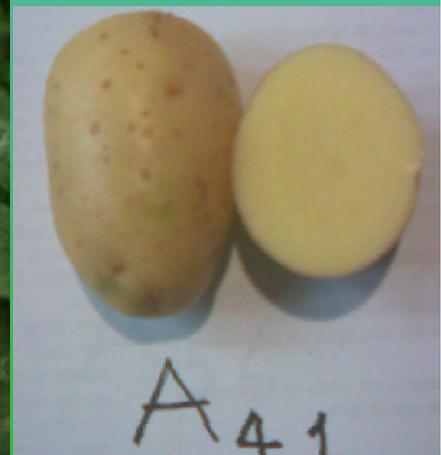


The line resistance to virus





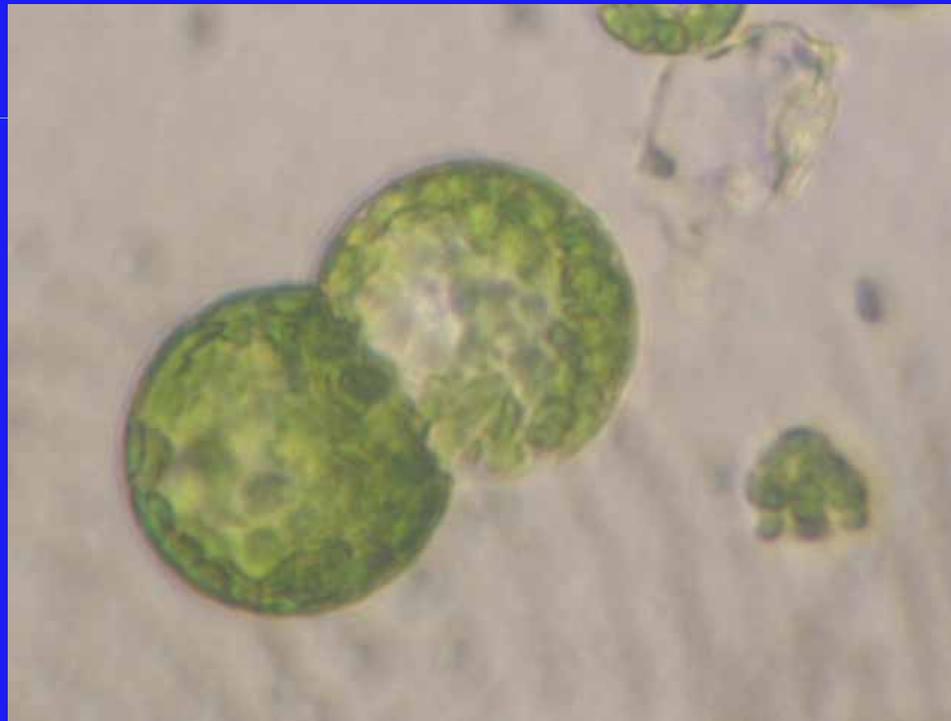
The line resistance to virus





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## Amalgamate the cells



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VEF Visiting Scholar 2007



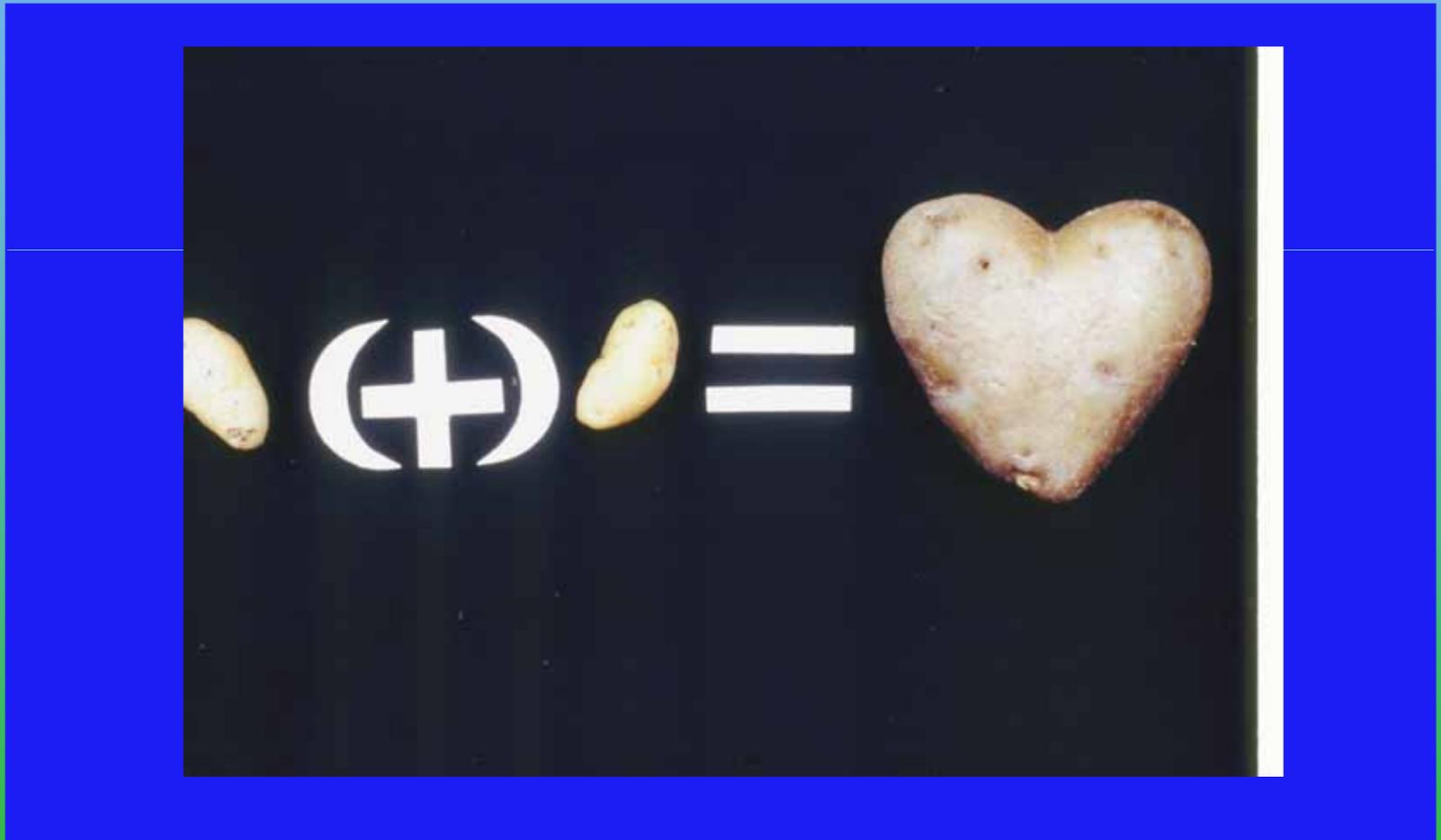
## Seeds harvest







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## **VIETNAM EDUCATION FOUNDATION ALUMNI CONFERENCE 12-12-2008**

### **Research: HUA**

**Can be apply Biotechnology on potato seeds production with resistant to virus diseases, low initial price and qualities seeds to farmers?**

**Yes! The yield increase 20%**

**Good and quality seed for farmer to expand the potato area to 200.000 ha at the Red River Delta in the North VN**

**Dr. Nguyen Quang Thach-Director of Agrbiology Institute HUA**

**Dr. Frank Shotkoski-Cornel Uni., College of Agriculture and Life Science**

**Opportunity: To continue for next research on Biotechnology on the potato seeds production with resistance to Late Blight disease**





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Collaborating with other individuals and organizations in efforts beneficial, directly or indirectly, to the development of research and teaching activities in Vietnam University (VEF)  
- To associate with trader company (Pepsicola-chips potato)

### Characterisation of *Phytophthora infestans* populations from Vietnam

V. H. Le A , C , X. T. Ngo B , M. B. Brurberg A and A. Hermansen A

A Bioforsk – The Norwegian Institute for Agricultural and Environmental Research, Plant Health and Plant Protection Division, Høgskoleveien 7, 1432 Ås, Norway.

B Hanoi Agricultural University, Trau Quy, Gia Lam, Hanoi, Vietnam.





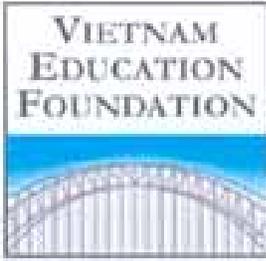
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Dr. Frank Shotkoski-Cornel Uni., College of Agriculture and Life Science



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Hope, all VEF fellows go to back home to built up VN to get more beautiful, progress, too rich country same as US and we always proud VN is our motherland for ever



**Thank you!**