



# Horticulture Innovation Lab Regional Center at Kasetsart University

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**USAID**  
FROM THE AMERICAN PEOPLE

**HORTICULTURE  
INNOVATION LAB**

**UC DAVIS**  
UNIVERSITY OF CALIFORNIA

# Primary goals of the centers:

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- ▶ **Researching, innovating and disseminating** horticultural technologies
- ▶ **Training** farmers, horticultural stakeholders, extension agents and researchers
- ▶ **Building** capacity among local institutions

**Meeting food needs and improving nutrition and human health** in the developing world

**Providing opportunities for increasing income,** economic and social advancement

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# Objectives

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- ▶ To enable and promote adoption of **horticultural technologies**
- ▶ To provide **training programs** for professionals, on-site and across the region
- ▶ To encourage **entrepreneurs** to utilize and manufacture innovative technologies
- ▶ To serve as **repositories and dissemination points** for knowledge
- ▶ To facilitate human **capacity building**
- ▶ To undertake appropriate **research**
- ▶ To promote economically and environmentally **sustainable agricultural production** among small- to medium-sized farms, especially those managed by **women**.



# To enable and promote adoption of horticultural technologies

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## ▶ Pest exclusion net ...





To provide training programs for professionals, on-site and across the region



# To provide training programs for professionals, on-site and across the region

## ▶ Cambodia:

- ▶ Training (with AVRDC) in RUA.
  - ▶ [low cost cool room & CoolBot]
- ▶ Training on how to build cool room and monitoring power usage
  - ▶ (with Prof Reyes)



# To provide training programs for professionals, on-site and across the region

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## ▶ Bangladesh

- ▶ The postharvest training with DAI. The aim is to teach farmers to understand the main postharvest needs in Bangladesh, and the importance of good postharvest handling practices for the target crops.





# To provide training programs for professionals, on-site and across the region

## ▶ Nepal:

- ▶ Postharvest technologies
- ▶ Hamsapur, Chitawan, and Katmandhu



# To undertake appropriate research

- ▶ Natural, edible coating
- ▶ Postharvest
- ▶ Agricultural machinery
- ▶ ...



# D-Lab

- ▶ Young coconut shell opener for retail sale
- ▶ Low cost vacuum seal for agricultural product packaging
- ▶ Cold room for small scale farmer
- ▶ Solar dryer for agricultural products
- ▶ Small scale rice grader for organic rice products.



## New and exciting development:

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- ▶ *Conservation agriculture* (Prof Manny Reyes)
- ▶ *Sustainable Intensification Innovation Lab* (Prof Rick Bates)
  - ▶ Women in Agriculture Network (WAgN) Cambodia: Gender- and Ecologically Sensitive Agriculture
- ▶ *'Feed the Future Asia Innovative Farmers Activity'*  
USAID funded project (Winrock International)
- ▶ **Dual/joint** MS (Food Security and Climate Change)
  - ▶ Erasmus+ project proposal



# Feed the future

## Asia Innovative Farmers Activity

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### Winrock International

- ▶ KU + WFLO
- ▶ Resource partners ...
- ▶ Winrock will **increase** agricultural productivity and related investments and **strengthen** the region's ability to promote scalable agricultural solutions across Asia.
- ▶ The outcome will **increase** food security, **reduce** poverty, and **improve** environmental sustainability.

### Two initial packages of interventions:

- ▶ The horticulture package focuses on using **pest exclusion nets**
  - ▶ The aquaculture package ...
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# ASEAN: Capacity building in Agriculture



S E A M E O  
**SEARCA**

Southeast Asian Regional Center for Graduate Study  
and Research in Agriculture  
Science and Education for Agriculture and Development

Offers 30-40 MS/PhD scholarships per  
year

- ▶ To ASEAN member countries
- ▶ To study at five SEARCA University Consortium member universities.



**SEARCA  
University Consortium**

Thailand (KU)  
Malaysia (UPM)  
Indonesia (IPB, UGM)  
Philippines (UPLB)

# Dual research MS/PhD in Agriculture

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Dual research MS agreement by the 5 UC members, **since 2015**.

- ▶ a compulsory mobility during the 2<sup>nd</sup> semester
- ▶ 2<sup>nd</sup> year for thesis research, jointly supervised by two universities



**SEARCHA  
University Consortium**

Thailand (KU)  
Malaysia (UPM)  
Indonesia (IPB, UGM)  
Philippines (UPLB)

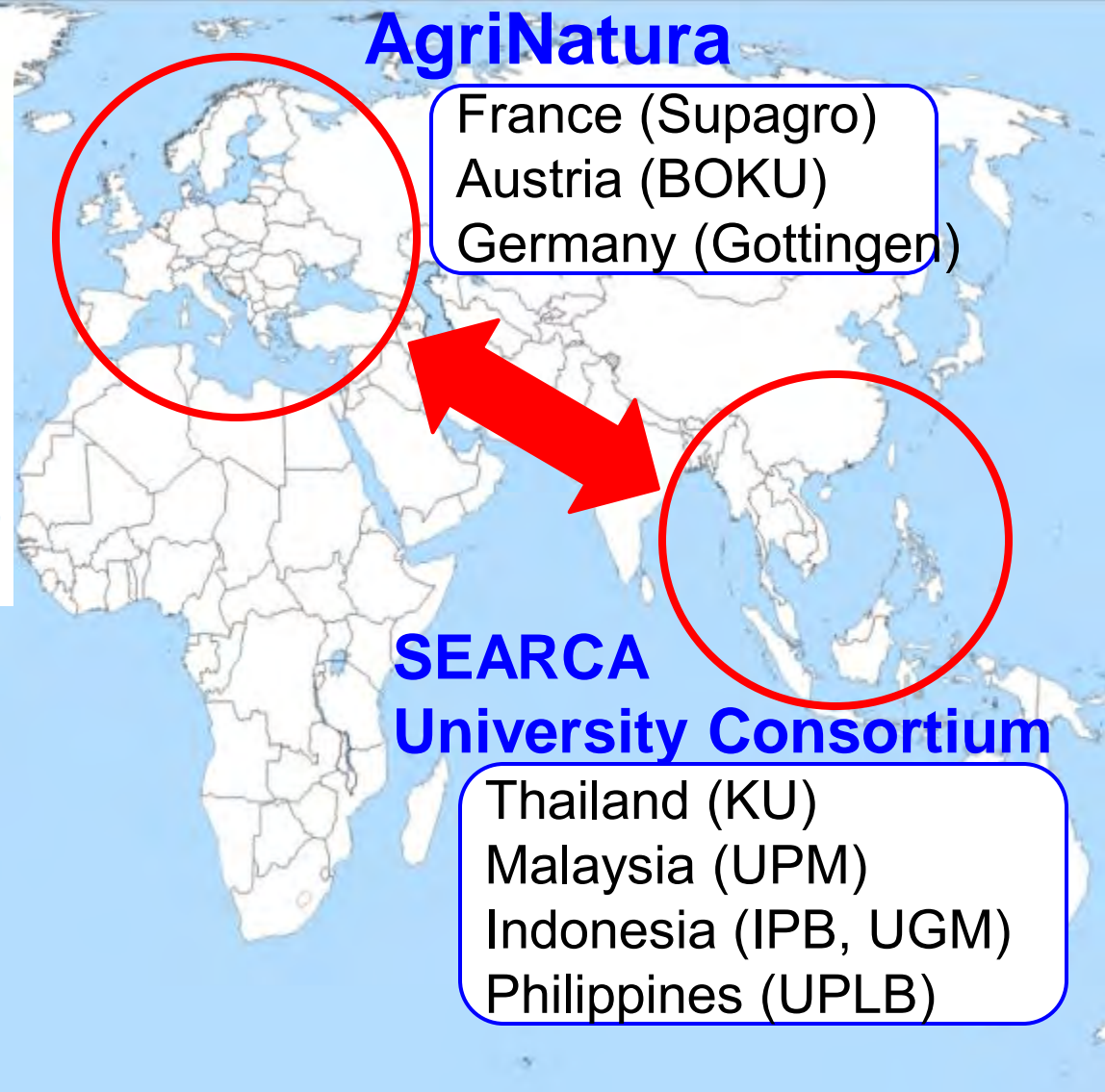
# An Erasmus+ proposal: Joint MS (Food Security and Climate Change)



Erasmus+

Selection: 2016

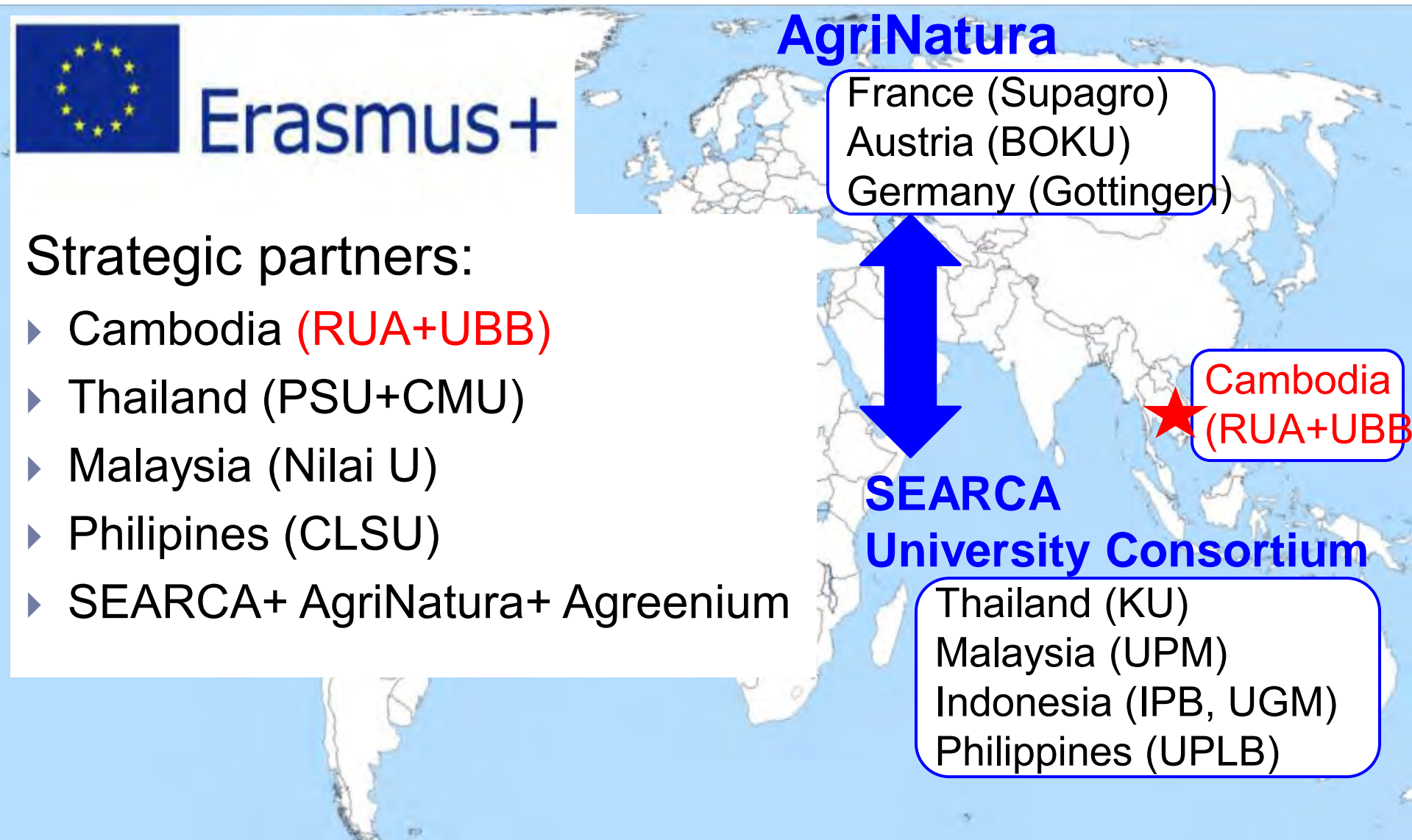
KA2 – Cooperation for innovation and the exchange of good practices – **Capacity Building in the field of Higher Education**





# Dual/joint

MS (Food Security and Climate Change)



# MS FSCC two possible tracks

Track 1  
(2 years)

Common selection and admission procedure

Orientation week – all students (UC summer school I)

UC member I (home)

30 ECTS

UC member II (host)

30 ECTS

(UC summer school II)

UC members (home+host)  
60 ECTS: co-supervised thesis

Track II  
(2.5 years)

UC member I (home)

30 ECTS

UC member II

30 ECTS

UC summer school II

**Aginatura Univ. partner**

**30 ECTS**

MS FSCC members (home+host)

60 ECTS of Thesis

UC forum

# Proposal for possible collaboration:

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- ▶ Capacity building for feed the future countries
  - ▶ Nepal, Bangladesh, Cambodia (... future strategic partners?)
- ▶ Curriculum development focused on *Horticulture technology innovation*:
  - ▶ Courses, summer schools, case studies, internship, MS research, or other activities
  - ▶ Dual/joint MS FSCC degree
- ▶ Nutrition security to stop hidden hunger ?





# มหาวิทยาลัยเกษตรศาสตร์ Kasettsart University



Kasettsart University

Knowledge of the Land

## Prosperity of the nation



