Agricultural Higher Education in the 21st Century

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Vice President of Communication – IAAS World
About IAAS

- The largest agricultural student association
- Established: 1957
- Over 40 member countries, over 10,000 members

Mission

“To promote the exchange of experience, knowledge and ideas in the field of agriculture and related sciences.”
Student view: Attractiveness & Employability
The students from now will be the professionals in 2050!

- Strongly increased food demand
- Innovation and application of agricultural knowledge necessary
- Current students play key role
CHOICE OF STUDY

INFLUENCING FACTORS:

- Interesting study
- University
  - Attractiveness
  - City
- Future Job:
  - Social Status
  - Comfort
  - Security
Millennial Work Values = Perception Disconnect?

Most Important Thing to Millennials = Meaningful Work
What Managers Think Is Most Important Thing to Millennials = Money

Managers’ and Millennials’ View of the Most Important Factor That Indicates Career Success to Millennials

<table>
<thead>
<tr>
<th>Factor</th>
<th>Managers</th>
<th>Millennials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaningful Work</td>
<td>30%</td>
<td>11%</td>
</tr>
<tr>
<td>High Pay</td>
<td>48%</td>
<td>27%</td>
</tr>
<tr>
<td>Sense of Accomplishment</td>
<td>24%</td>
<td>11%</td>
</tr>
<tr>
<td>Challenging Work</td>
<td>10%</td>
<td>8%</td>
</tr>
<tr>
<td>High Level of Self Expression</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>High Level of Responsibility</td>
<td>12%</td>
<td>3%</td>
</tr>
</tbody>
</table>


“What did the millennials want most?

MEANINGFUL WORK”

27-05-2015 on his website
CASE EXAMPLE

At my high school Information session: Future Jobs

“ENTREPRENEUR”
ENTREPRENEUR

FULL CLASS

INTERNATIONAL ASSOCIATION OF STUDENTS IN AGRICULTURAL AND RELATED SCIENCES
ENTREPRENEUR

INTERNATIONAL ASSOCIATION OF STUDENTS IN AGRICULTURAL AND RELATED SCIENCES
Do you realize: agricultural entrepreneur ?!
Agricultural entrepreneur ?!
3 remained
CHOICE OF STUDY

FACTORS INFLUENCE CHOICE OF STUDY:

- Interesting study
- University
- City
- Future Job:
- Social Status
- Comfort
- Security
PROBLEM

NOT ENOUGH AGRICULTURAL STUDENTS

→ TACKLE ON 2 LEVELS

1. Classroom full

2. Those remaining: End up in agriculture
METHOD ANALYSIS

INTERVIEWS WITH AGRICULTURE RELATED STUDENTS

- 18 students
- 15 different countries
- 5 continents

- Personal communication with universities
- Web research
- Personal thoughts
QUESTIONNAIRE

INTERNATIONAL ASSOCIATION OF STUDENTS IN AGRICULTURAL AND RELATED SCIENCES
QUESTIONNAIRE

INTERNATIONAL ASSOCIATION OF STUDENTS IN AGRICULTURAL AND RELATED SCIENCES
QUESTIONNAIRE

TOPICS

1. Social Status  
   Awareness society / attractiveness / “uncool”?

2. Curriculum  
   Quality courses: determined by what?

3. Extra Curricular  
   Opportunities / Influence on attractiveness

4. Other  
   Finance / International student mobility / University ranking
PROBLEM

NOT ENOUGH AGRICULTURAL STUDENTS

→ TACKLE ON 2 LEVELS

1. Classroom full
   - IMAGE

2. Those remaining: End up in agriculture
IMAGE

- CURRENT
- WHY
- IMPROVE
CURRENT IMAGE
Student answers: Awareness World Food Problem

<table>
<thead>
<tr>
<th>AWARE</th>
<th>PARTLY</th>
<th>NOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>Mexico</td>
<td>Chile</td>
</tr>
<tr>
<td>Uganda</td>
<td>Ukraine</td>
<td>Canada</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>Germany</td>
<td>Croatia</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Spain</td>
<td>Italy</td>
</tr>
</tbody>
</table>

Facing food security problems themselves
CURRENT IMAGE

Awareness World Food Problem? **AWARE**

- Ag. students have relative high social status
- Also relatively high % interested to study agronomy

Why?
Higher awareness of the importance of agronomy to daily life
CURRENT IMAGE

Awareness World Food Problem?  NOT AWARE

Ag. students generally relatively low social status:
- Mostly “uncool”
- Need to defend their choice of study

Some higher social status:
- Big ranches
- Engineering
CURRENT IMAGE

Image we perceive via the media, e.g. tv-series:

VS

“Farmer wants a wife”
CURRENT IMAGE

Image we perceive via the media, e.g. tv-series:

Both extremely popular, differences in main characters:

<table>
<thead>
<tr>
<th>“Suits”</th>
<th>VS</th>
<th>“Farmer wants a wife”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self confident</td>
<td></td>
<td>Mostly shy</td>
</tr>
<tr>
<td>Arrogant</td>
<td></td>
<td>Somewhat clumsy</td>
</tr>
<tr>
<td>Dressed in suit</td>
<td></td>
<td>Dressed in overall</td>
</tr>
</tbody>
</table>
CURRENT IMAGE

Image we perceive via the media, e.g. tv-series:

Why popular?

“Suits”
- We want to be like the main characters

“Farmer wants a wife”
- We feel sympathy for the farmer who needs help to find him a wife.
WHY THIS IMAGE?

What are the factors that influence this image?
WHY THIS IMAGE

1. Agriculture is bound to rural environment
WHY THIS IMAGE

1. Agriculture is bound to rural environment

YUP = young URBAN professional

NO YRP = young RURAL professional
WHY THIS IMAGE

2. The look associated with ag. is in general less attractive
3. No strong link agriculture and science

History
- From its very beginning: practice without science input.
- Most of the popular studies: from their start a science

Subsistence Farming
- Without education
- Without other job
- Only way to survive
3. No strong link agriculture and science

Agriculture, food and natural resources enrollment and employment outlook 2013 - USA

**PEERS THINK:**
- Little education needed
- No diverse job opportunities

**Perceptions of Careers in Ag & Food**

- Little education needed: 2% (Respondents) vs. 39% (Peers)
- Hard work and little pay: 19% (Respondents) vs. 44% (Peers)
- Limited number of opportunities: 7% (Respondents) vs. 23% (Peers)
- Production focused: 16% (Respondents) vs. 27% (Peers)
- Neutral - No different than other industries: 8% (Respondents) vs. 19% (Peers)
- Rewarding opportunities: 14% (Respondents) vs. 52% (Peers)
- Provide good benefits: 9% (Respondents) vs. 12% (Peers)
- Optimistic about the number of opportunities available: 13% (Respondents) vs. 32% (Peers)
- Diverse career opportunities: 17% (Respondents) vs. 56% (Peers)
IMPROVE THE IMAGE
Promote the importance of agriculture and its sciences
IMPROVE THE IMAGE

1. Promote the important role of agriculture

- Link between food & agriculture has been lost
- Food comes from supermarkets; not from the field

INTERNATIONAL ASSOCIATION OF STUDENTS IN AGRICULTURAL AND RELATED SCIENCES
IMPROVE THE IMAGE

2. Promote specifically the work of researchers and agronomists.

- Not everyone in the sector is a farmer
- Broaden the image
IMPROVE THE IMAGE

3. Promote the “BIG FACTS”

- Highly challenging tasks
- No awareness

“What did the millennials want most? MEANINGFUL WORK”

- In agriculture you can find this!

With current global trends in diets and population, 60% MORE FOOD will be needed in 2050.

Source: Alexandratos and Bruinsma, 2012
IMPROVE THE IMAGE

Promote the importance of agriculture and its sciences

- More media attention

- Students mention:
  - Universities try their best
  - Governments should take responsibility

Wageningen UR:
Weekly newspaper advertisements
PROBLEM

NOT ENOUGH AGRICULTURAL STUDENTS

→ TACKLE ON 2 LEVELS

1. Classroom full
   ➢ IMAGE

2. Those remaining: End up in agriculture
   ➢ EMPLOYABILITY
EMPLOYABILITY

- STUDENT VIEW
- DATA
Roughly all over the world the same answer:

Students feel **confident** to find a job after graduation.

“Our job will only be gone when people stop eating”
EMPLOYABILITY: DATA

Feeling students confirmed by the actual numbers.

Examples from:

- Spain
- Poland
- Belgium
- USA
EMPLOYABILITY: DATA

Percentage of graduates that found a job within 1 year after graduation. 95%

SPAIN – Politécnica Madrid

“The bad times in which we’re living don’t seem to affect the agricultural engineers”

“One of the jobs with the highest rate of employed people in times of crisis”

http://llcg.dev.teched.hr/ALMIS-Dev/Occupation/Selected/2213177#tabs-0
EMPLOYABILITY: DATA

Percentage of graduates that found a job within 1 year after graduation.

BELGIUM: Bio science engineering

94%

EMPLOYABILITY: DATA

Percentage of graduates that found a job within 1 year after graduation.

<table>
<thead>
<tr>
<th>Category</th>
<th>Employment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>All studies</td>
<td>97%</td>
</tr>
<tr>
<td>Ag. Related studies</td>
<td>94%</td>
</tr>
</tbody>
</table>

POLAND
EMPLOYABILITY: DATA

According to the AgCareers.com Enrollment and Employment Outlook Survey:

In 2013 there were 56,000+ career opportunities in the industry but only 29,000 graduates were trained to fill them.

Figure 3.1
Feeling students confirmed by the actual numbers.

Examples from:
- Spain
- Belgium
- Poland
- USA

4 times favourable for agricultural sector: **Promote this positive aspect!**
PROBLEM

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2. Those remaining: End up in agriculture
   ➢ EMPLOYABILITY
   ➢ QUALITY OF EDUCATION
QUALITY OF EDUCATION

- CURRICULUM
- EXTRA CURRICULAR
- FINANCE
CURRICULUM

“What is important for the quality of the study?”

- Quality of curriculum: answers differ per university / study.

- General aspect:
  - Inclusion of current topics / new insights
  - Join the public debate
EXTRA-CURRICULAR

“Do you think these activities increase the attractiveness of your study?”

- Internships / Seminars / Guest lectures / Exchange Weeks
- Increase engagement with the study

“For me all the extra curricular activities have been a great positive surprise that make me love my study more and more”

“When you take part in those activities you get directly involved by what you do. It happened to me :D !”
EXTRA - CURRICULAR

And there are many great opportunities in our field:

- Google Science Fair 2014
- THOUGHT FOR FOOD
  - Feb. 2015 - Lisbon
- YOUTH AG-SUMMIT
  - Aug. 2015 - Canberra
- And many more!
EXTRA-CURRICULAR

“Do you think these activities increase the attractiveness of your study?”

- Increase engagement with the study

- Now: High School students who choose have no idea about the great opportunities!

- “Improving attractiveness is just a way of marketing.”
FINANCIAL

PERSONAL EXAMPLE:

<table>
<thead>
<tr>
<th>ELIZABETH</th>
<th>LISANNE</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRONOMY</td>
<td>AGRO and ECO SYSTEMS ENGINEERING</td>
</tr>
<tr>
<td>KENYA</td>
<td>BELGIUM</td>
</tr>
<tr>
<td>€1500,- / year ; 5 years</td>
<td>€600,- / year ; 5 years</td>
</tr>
<tr>
<td>No fair chance on grant from govn.</td>
<td>€300,- a month from the Dutch govn.</td>
</tr>
<tr>
<td>GDP/CAPITA: 1245 US $</td>
<td>GDP/CAPITA: 50.792 US $</td>
</tr>
</tbody>
</table>

→ DIFFICULT TO STUDY AG. BUT VERY MUCH NEEDED!
CONCLUSIONS
PROBLEM

NOT ENOUGH AGRICULTURAL STUDENTS

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1. Classroom full
   ➢ IMAGE

2. Those remaining: End up in agriculture
   ➢ EMPLOYABILITY
   ➢ QUALITY OF EDUCATION
CONCLUSIONS

IMPROVE IMAGE
- Create awareness for the role of agriculture in our daily life.
- Distinguish between farmer and agronomist
- Spread the big numbers: 60% increased yields by 2050!
  Task of government to take initiative; universities can play a role

EMPLOYABILITY
- Are good! Spread that message!

QUALITY OF EDUCATION
- Promote extra curricular opportunities: high involvement with study.
  Increases attractiveness.
Thank you

Lisanne Meulendijks
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