EFFICIENT KNOWLEDGE TRANSFER IN DAIRY PRODUCTION IN THE NETHERLANDS

Jeroen Nolles
Head team Livestock & Entrepreneurship
Aeres University of Applied Sciences
Focus on recent developments

1. Organisation Dutch Education system
   - Focus Applied University
   - Study program – competence based learning
2. Golden Triangle (in Dutch: “OVO Drieluik”)
3. How to organize ‘knowledge transfer in the future?
   - ‘Where to start’?
1. Organisation Dutch Education System

Different levels -> introduction BaMa-structure

Study program for Applied Bachelor
- Competence Based Learning
- Competence = Knowledge x Skills x Attitude

Structure:
- Job Task = learning in practice!
  - Farm Analysis for Dairy Farmer
  - Applied Research for Feed Company
  - Farm successor report report for student and family

Different classes, training etc about this task and context
2. Knowledge circulation in ‘Golden Triangle’
### Step by step “learning in practice” program

#### PRAKTIJKLEREN AAN CAH VILENTUM
van praktijk naar beroep

Focus op

- Ondernemen
- Integreren
- Experimenteren
- Valoriseren
- Onderzoeken
- Vakbekwaamheid
- Innoveren
- Internationaliseren

<table>
<thead>
<tr>
<th>Competenties</th>
<th>Niveau 1</th>
<th>Niveau 2</th>
<th>Niveau 2</th>
<th>Niveau 3</th>
<th>Niveau 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onderzoeksleerlijn</td>
<td>Niveau 1</td>
<td>Niveau 1/2</td>
<td>Niveau 2</td>
<td>Niveau 3</td>
<td>Niveau 3/4</td>
</tr>
<tr>
<td>Ondernemerschaps-leerlijn</td>
<td>Vak</td>
<td>Management</td>
<td>Management/ ondernemerschap</td>
<td>Ondernemerschap</td>
<td>Business-development</td>
</tr>
<tr>
<td>Faciliteiten</td>
<td>Lab’s, APC + kas, bedrijven (stages)</td>
<td>APC/kas ism bedrijven</td>
<td>Bedrijven, projecten, duale trajecten</td>
<td>Bedrijven, projecten, duale trajecten</td>
<td>Bedrijven, duale trajecten</td>
</tr>
<tr>
<td>Curriculum</td>
<td>Leertaken</td>
<td>Leertaken/ (bedrijf)opdrachten</td>
<td>Leertaken/ bedrijfsoopdrachten</td>
<td>Leerwerkplekken</td>
<td>Leerwerkplekken</td>
</tr>
<tr>
<td>Betrokkenheid bedrijven</td>
<td>Publiek</td>
<td></td>
<td></td>
<td></td>
<td>Privaat</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LEERJAAR</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>
More applied research on Applied Universities (HBO) – Centre of Expertise
3. How to organise ‘knowledge transfer in the future’?

GOAL: Future Focused Dairy Education

1. Start in the future -> + 8 years from now
2. Soil based knowledge
3. Learning from diversity
Soil type is the basis for a dairy farm.
Classification determines type of soil -> huge diversity of effects on farm level

- Clay, silt, sand and organic matter
  - Basis for possibilities with this soil
    - Type of crops (and competition in market)
    - Grazing
  - Basis for ‘challenges’
    - Leaching, rewetting, drought
    - Subsidence ->
      - ... regulation
  - Basis Nutrient management cycle

- Basis for Farm Management
  - Unique solutions
  - Regional knowledge valuable
Learning from diversity in Education Farm!

- Three farm types – different regions and soil types
- University farm needs diversity (!) – 4 x focus:
  - Feeding
  - Automatization
  - Grazing
  - Organic Dynamic
- Students are the farmers
Synthesis: Definition of new starting point is necessary!
Conclusions

Move from efficient to effective knowledge transfer

Definition of new starting point for applied education and research is necessary – less efficient, more effective for practice
Thank you!