10 YEARS MANAGEMENT OF ON FARM DAIRY PASTURE PROJECTS:
REVIEW OF METHODOLOGY AND RESULTS

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Projects

“Improve pasture & dairy production”
- 4 pilot farms

Dairyman: 2010-2013; EU Interreg IVB:
“Sustainable dairy production”
- NWE: 7 countries, 10 regions (B, D, F, IR, NI, L, NL)
- Network of 130 pilot farms (Lux. 6 farms; 3 pasture farms)

Autograssmilk: 2014-2015; EU P7
“Combine AMS & pasture”
- 6 countries (B, DK, F, I, NL, S, L coop since 2014)
- 37 monitor & experimental farms (LUX: 4)
Feed and pasture calendar
and 4 explicative graphs

Feed intake

- KF Stat
- KF MW
- Sonstiges
- SAFT futter
- Stroh
- Mais
- Heu
- Grassilage
- Weide
Feed & pasture calendar: Feed cost simulation

Pasture cost: 0.05 €/kg DM
Feed cost: 0.22 €/kg DM

Milk yield (kg Milk/cow/day) vs Pasture (% DM) graph showing data points and trend lines.
Pasture management

- 2003- 2006: Pasture management by guidelines:
  - Graze early in spring!
  - Graze tight with low pregrazing high!
  - Reduce supplementary feeding!
  
  → Grass silage → Maize silage → Concentrates

- 2006: Pasture management with weekly farm walk
  - Estimate available pasture
  - 2006- 2008: „Pasture days ahead“ (F)
  - 2008- : Feed wedge (NZ)
Estimate available pasture: Weekly pasture walk with

- Grassmaster (2003-04):
  - Electric impedance
- Herbomètre (F) &
- Rising Plate Meter (NZ)
  2005-2010
- Compressed grass high
Estimate available pasture: “Weekly pasture drive”

Feedreader

Quad & Ultrasonic sensor
Evaluate available pasture:
Feed wedge

Recorded data must be transposed into understandable figures
Problems:
- In time with measurements
- No autonomous weekly pasture walk
  (no measurements and data handling by farmers)
- Impact on farmers decision not evident
  (simple guidelines are well accepted)

Improve tools –
improve knowledge transfer – improve knowhow
Farm development plan:
- Farm specific
- Objective driven – Strategy - Indicators

**Selection of objectives**

**FARM DESCRIPTION**
- Pasture intake
- Grass growth
- Pasture infrastructure

**OBJECTIVES**
- Pasture intake
- Grass growth
- Pasture infrastructure

**STRATEGY**
- Action | Indicator | Actual target
- Action | Indicator | Actual target
- Action | Indicator | actual target

Sustainable improvement
## Final Evaluation

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<tr>
<th>Component</th>
<th>F&amp;P</th>
<th>GM</th>
<th>HM</th>
<th>RPM</th>
<th>FR</th>
<th>FW</th>
<th>FDP</th>
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<td>Time consuming</td>
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<td>Spec. Knowledge (technical realisation)</td>
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<td>Spec. Knowledge (data interpretation)</td>
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<tr>
<td>Accuracy</td>
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<td>Acceptance (with technical help)</td>
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<td>Acceptance (autonomous)</td>
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Conclusions

- Pilot farm networks are very appropriate for implementing innovating ideas
  - Exchange platform & knowledge transfer
    (research-advisory-farming praxis-education)

- Multi actor network:
  - More actors → more time needed for agreement ("slower")
  - More actors → higher implementation of the results

- Proposed scientific tools not always in accordance with farmers demands and skills
  ("visual, intuitive" ← → "scientific model")
  - Time consuming to collecting data
  - Specific knowledge to interpret data
  - Farmers have an intuitive understanding of complicated farm process
Pilot farm network:
Analyse dairy production systems

- Analyse dairy production systems
  - Explicative data analysis
  - Criteria for success pasture based- indoor- mixed system

- Settings
  - Great number of divers pilot farms & regions (countries)
  - All farming systems (not only grazing)
  - Homogenous data recording and treatment

- Create a European reference network
  - Smaller networks can refer to!
  - Great help for small countries with divers pedo- climatic conditions