Complementing the global vision

*agri benchmark* Beef and Sheep Network

Claus Deblitz
Thünen Institute of Farm Economics

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Contents

1. The global perspective of *agri benchmark*
2. The unique data set we produce
3. What we can measure
4. Possible pilot projects
The global perspective of *agri benchmark*
Our core competence:
Production systems and their economics
An expert network which started in 2002
Global, non-profit, independent
Standardised methods
Reflecting framework conditions and drivers
Research partners of the Beef and Sheep Network
Why global farm-level benchmarking?

- We are all directly or indirectly linked via markets and product flows
- Decision making is done by millions of producers every day
- It needs an approach in close cooperation with producers
- On global scale there is a lack of comparable farm data
- Collecting and comparing this data and information assists in

**Understanding agriculture worldwide**

- Know **where** you are
- Learn **why** you are where you are
- Conclude **what** can be changed to develop
Complementing the global vision

Comparative global analysis of

• Productions systems
• Economics (cost of production, prices, profitability)

Policy analysis (what-if)

Farm strategy analysis (what-if)

Emission analysis (+ environmental indicators)

Close cooperation with producers and advisors
### Comparison of finishing farms 2011 in US$

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Countries in the *agri benchmark* Network

**New countries 2013**
- Ireland (beef/sheep)
- Uruguay (beef/sheep)
- China (sheep)

**Complementing the global vision**

<table>
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<th>2013 Countries</th>
<th>2013 Farms</th>
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<td>Cow-calf</td>
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<td>Beef finishing</td>
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<td>70</td>
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<tr>
<td>Sheep</td>
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- Participating countries 2013
- Contacts for further growth
Imagine you have a guest from a foreign country who is interested to see how sheep farming is done in your country.

You would want to show your guest a farm that is

- located in an **important** sheep producing **region**,
- using the **common technology** for sheep production,
- running the **prevailing** production **system**,
- having a not too small and not too big **size**,
- using the prevailing combination of **labour, land and capital**.

**In other words, you want to show your guest a typical farm!**
Typical farms – three sources of data

- **Statistics** available to determine
  - important regions
  - farm sizes and distribution

- **Focus groups** of producers and advisors to
  - define prevailing production systems
  - collect data in a standardised way

- **Expertise** of researchers + advisors + farmers
  - Production system knowledge
  - Explore adjustments to changes in frame work conditions (forward looking results)
Types of farms covered

- So-called ‘smallholder farms’, typically in mixed farming situations (Indonesia, China)
- Small family farms with non-ag income on-farm, for example forestry, tourism + off-farm income (Austria)
- Full time family farms without employees (everywhere)
- Family farms with permanent employees (Western Europe)
- Large commercial farms with permanent employees (Eastern Europe)

- Specialised farms (feedlots)
- Mixed farms
  (cow-calf + beef finishing, crop + bf, dairy +bf, crop + sheep ...)

Complementing the global vision
What we can measure
### The data covered in the production system

#### Animals

**Breeds**
- Suckler-cows
- Breeding bulls
- Female calves
- Male calves
- Heifers < 1 year
- Heifers 1-2 years
- Heifers > 2 years
- Fattening bulls
- Fattening steers
- Fattening heifers
- Fattening cows
- Fattening calves

#### Performance

**2 cow mobs**
- Cull %
- Mortality
- Age at first calving
- % artificial insemination
- Weights

**5 finishing groups**
- Age at start
- Age at end
- Weight at start
- Weight at end
- Daily weight gain
- Dressing percentage
- Mortality

#### Feeding

- Tons per category and year
- Home-grown feed
- Purchase feed

- 5 feeding periods per group
- Kg per animal and day
- Home grown feed
- Purchase feed
### Key output indicators – physical

#### Factor Productivity
- Labour productivity (kg live / carcass weight per hour)
- Stocking rates (Livestock units per hectare)
- Land productivity (kg live / carcass weight per hectare)

#### Animal Performance
- Herd structure
- Replacement rates
- Mortality
- Weaned calves per cow
- Weaned lambs per ewe
- Daily weight gain
- Dressing percentage
- Carcass weight

#### Feed Production / Feeding
- Nitrogen use
- Yields
- Losses
- Own feed
- Purchase feed (forage, grains, by-products)
- Feed rations per animal
- Feed conversion

#### Environment
- Manure systems
- Feeding systems
- Animal performance
- Feed production
- GHG Emissions
  - Enteric fermentation
  - Manure storage and spreading
  - Feed production
  - Carbon sequestration
- TO BE ADDED in 2014:
  - Water use
  - Nutrient flows
  - Energy use
Possible pilot projects
## Possible pilot projects beef cattle – using indicators from efficiency matrix

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**Institution**  
- N. Meat Board
- UFS / NAMC
- CEPEA / USP
- Plan Agropecuario
- UQLD + partners

**Funding**  
- Indobeef (ACIAR) application phase
### Possible pilot projects sheep and dairy – using indicators from efficiency matrix

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Conclusions

- *agri benchmark* offers a global platform for farm level analysis within the Agenda
- More environmental indicators must be added during the process ... but our new tool has already made prerequisites for most
- Subsistence or semi-subsistence farming situation can be added
- Drivers, incentives and decision making must be reflected
- Pilot projects should be aligned with gaps present in GLEAM ... and add experience from other livestock projects
- Economics has to be added sooner than later
agri benchmark
– passionate about facts

Claus Deblitz
Thünen Institute of Farm Economics
Bundesallee 50, 38116 Braunschweig
Germany

Tel.: +49-531-596-5141
Fax: +49-531-596-5199
E-mail: claus.deblitz@ti.bund.de
Internet: www.agribenchmark.org
www.ti.bund.de/bw