

Low Input dairy farming in Austria – Experiences from training courses and results of participating farmers

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Dairy farming strategies

Focus of training courses

high input high output per cow

- indoor housing
- intensiv rations
Concentrate, Corn, TMR

- Milk yield
> 10,000 kg/cow

different gradations

high input – medium output per cow

- concentrate +
forage feeding
systems

- > 8,000 kg
Milk/cow

medium input – medium output per cow

- forage +
concentrate feeding
systems

- 6,000 – 8,000 kg
milk/cow

low input low output per cow

- grazing systems
- up to 90 % pasture
- low concentrate

- 4,000 – 6,500 kg
milk/cow
- milk per ha grassland
> 10,000 kg

Low-Input goals

Minimization of

- **external input** (concentrate, energy, ...)
- **costs for machines**
- **conserved feed stuffs**
- **workload**

High amounts of

- **fresh forage in rations and high amounts of**
- **milk yield per ha grassland area**

→ **But:** high milk yields per cow **not possible**

Goals **Low-Input-Strategy (Low-Cost)**

„To produce products high in quality with low costs“

Goals **High-Input-Strategy (High-Output):**

“To distribute the relatively high costs on as much product as possible”

Compared to other grassland regions we have

special low input challenges in Austria

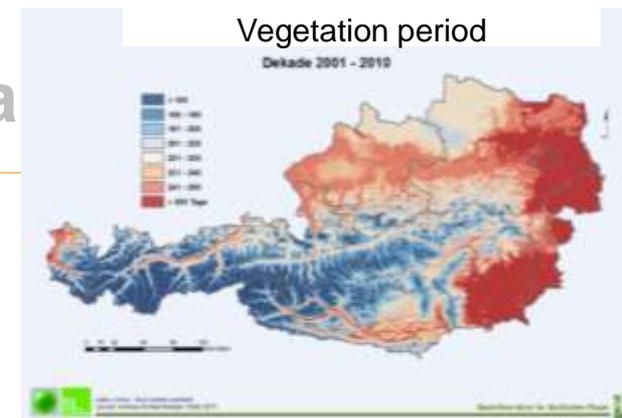
- short growing period
- expensive stables
- small farms with management disadvantages
- higher production costs
- cattle breeding and livestock export important
- grazing (was) declining

but also supportive

- ✓ high share of organic farms
- ✓ financial support for grazing
- ✓ premium milk programs in some regions

Low-Input strategy:

- technical and economic constraints
- lack of information



Training courses for farmers

in German: "Low-Input Praktiker-Ausbildung" since 2015

- ✓ The **transfer and exchange of knowledge and experience** between **farmers, advisors and researchers** was the main goal of the training courses.
- ✓ The **researchers and advisors stimulated active learning** with discussions and the training course partners worked on integrated management solutions in the fields of **feeding, housing, breeding, grassland management and economics**.
- ✓ The **participating farmers** were given **no strict guidelines regarding the speed and intensity of implementation of the low-input strategy**.
- ✓ All farmers **collected basic production and economic data** according to the methodology of the Austrian dairy cattle network (*Arbeitskreis Milchproduktion*).

2015 - 2017: 160 participants

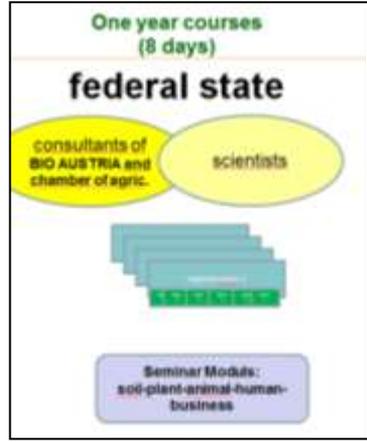


Training courses for farmers

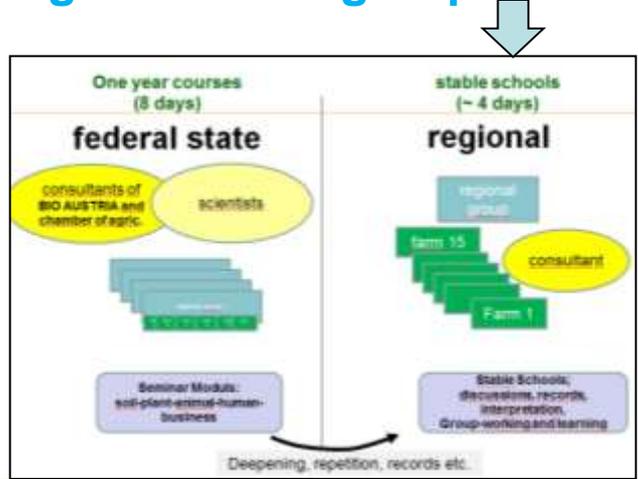
in German: "Low-Input Praktiker-Ausbildung"

Each course included **4 "two-day modules"** were different topics were discussed **indoors and additionally on low-input pilot farms**

- feeding – breeding
- animal housing – welfare
- grassland management – grazing
- economics – socio-economics

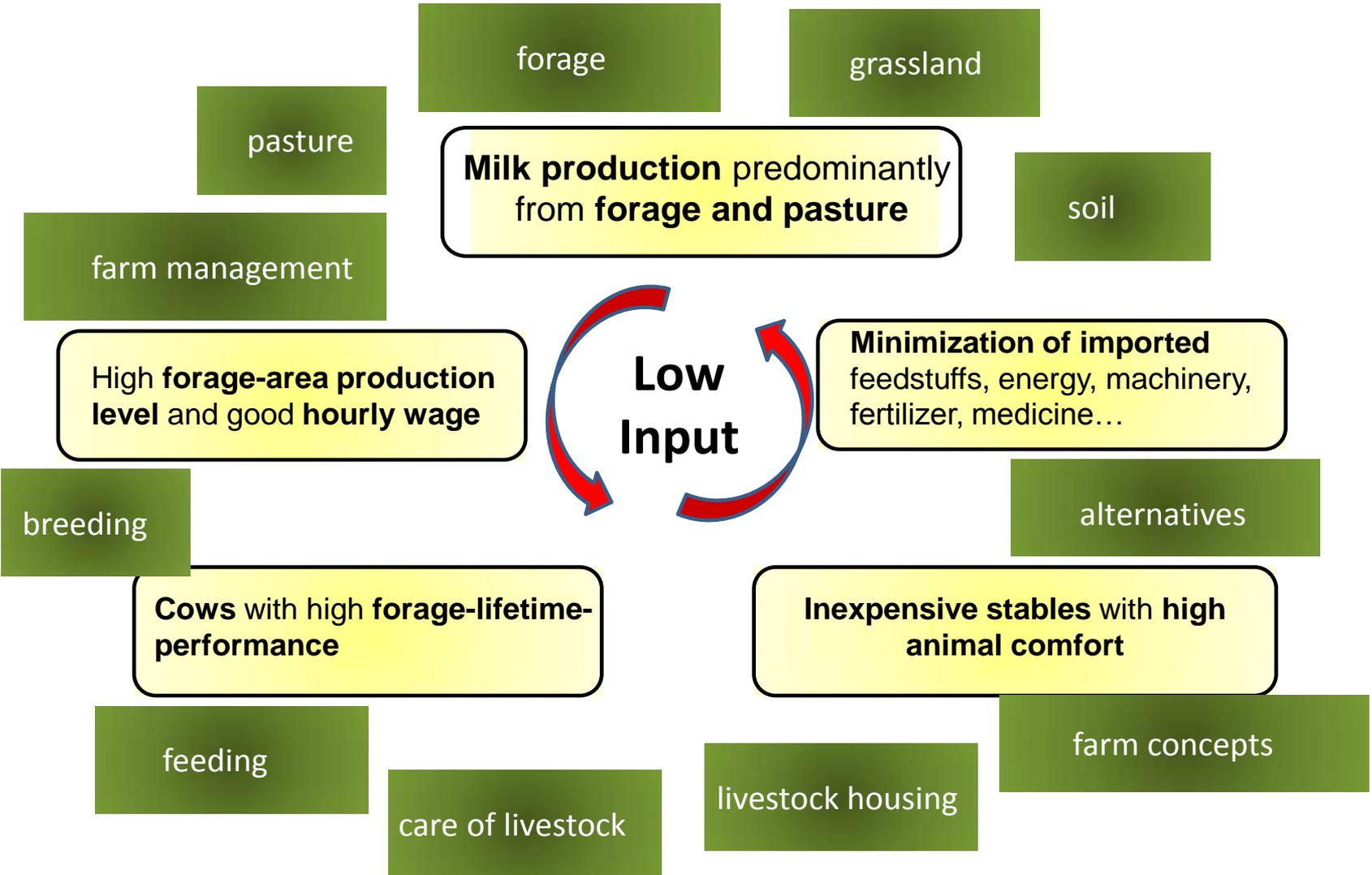


After each meeting consultants supervised further **"regional small group meetings"** ("stable schools") on different project farms



Grassland based organic low-input dairy production

- goals and training priorities



Current economic evaluation results -

Particularly important key factors for the economic success

Table: Key management and production factors (N=81, 2017: Organic Low Input farms)
Comparison of the better and weaker quartiles as well as average - ranked according to the economic results

	+25 %	average	-25 %	%-Difference +25 zu -25
Farms (cows/farm), N	20 (28)	81 (24)	20 (23)	
Marginal income, Euro/cow	2,819	2,215	1,613	175
Marginal income, Cent/kg milk	43.9	38.3	32.7	134
ECM-milk yield from forage, kg/cow a. y.	5,481	4,794	4,092	134
Milk from concentrate, kg Conc./kg milk	0.11	0.11	0.11	100
Milk yield per cow, kg/year	6,434	5,788	5,021	128
Replaced cows/year, %	19	24	26	73
Lifetime-performance/cow, kg milk	26,678	28,525	22,211	120
Bacterial milk quality count, in 1,000	10	12	13	77
Somatic milk cell count, in 1,000	128	137	141	91
Milk fat content, %	4.11	4.06	4.02	102
Milk protein content, %	3.40	3.31	3.23	105

Results

The **results** show that the following aspects are particularly important key factors for the economic success of the low-input strategy:

- 1) High **forage quality** during lactation, high **forage milk yield**, **feed cost reduction**
 - soil and grassland management
 - grassing and feeding management
 - efficient concentrate input,
- 2) Breeding strategies for **low-input adapted and fertile cows**
- 3) **High milk quality** and also **sufficient milk yield per cow**
- 4) Possibility to market the **milk within premium programs**

100 % of farmers rated the low-input training courses as “**very good**” or “**good**”:

Especially the

- ✓ **intensive exchange of practical experience** between the training course partners
- ✓ and the **discussions with the visited low input pilot farmers** were appreciated

Conclusions

- ✓ Optimal and site-adjusted low-input strategies offer a basis for a sustainable organic dairying in Austria.
- ✓ The courses – based on research results, practical experiences and intensive exchange - were powerful tools for agricultural development and knowledge transfer.



Thanks for your attention!

Further Information: www.raumberg-gumpenstein.at/bio-institut