

## **‘Stable Schools’ to promote animal health in organic dairy farming - First results of a pilot study in Germany**

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### **Abstract**

*The Stable Schools concept aims at common learning in farmer groups and has previously been implemented in Danish organic dairy farms. Focusing on herd health, four regional Stable Schools on in total 20 German organic dairy farms were initiated following a modified approach; i.e. additionally providing data on the health status of the farms based on a standardized protocol. After one year we investigated the farmers’ opinions of this modified concept and assessed the implementation of measures. The participants expressed a positive attitude toward this tool; they appreciated the joint search for effective and feasible measures and evaluated the self-determined approach in the Stable School as highly motivating. Accordingly, the compliance regarding implementation was high (about 2/3 of all recommended measures implemented). Since Stable Schools seem to strengthen the motivation of the participants to implement measures, and may be a promising tool to improve animal health.*

*Key words: Stable Schools, dairy cattle, animal health, knowledge exchange*

### **Introduction**

In organic livestock farming prevention of diseases is of major importance and it is essential to establish concepts to improve herd health. However, several studies indicate that production diseases, such as mastitis, metabolic disorders and lameness, play a considerable role in organic dairy farming (e.g. Reksen et al. 1999, Hamilton et al. 2006, Brinkmann et al. 2009). Since less a lack of scientific evidence but a lack of implementation of improvement measures accounts for sustained health problems, approaches that increase the motivation of farmers to implement measures should be emphasized, for example Stable Schools. This tool aims at fostering common learning in farmer groups and has been successful in promoting animal health and reducing antibiotics use in Danish organic dairy farming (Vaarst et al. 2007). Therefore a pilot-study on German organic dairy farms initiated regional Stable Schools focusing on animal health however additionally providing data on the health status of participating farms based on a standardized protocol. In this paper we present the degree of implementation of measures following the Stable School meetings and how the participating farmers viewed the approach.

### **Material and methodology**

Four regional Stable School groups consisting of five farms each were established. The Stable School concept (Vaarst et al. 2007) was modified in such a way that the participants were provided with standardized information on the health state of the herds in the participating farms. For this purpose, all project farms were visited during winter 2010/11 by independent assessors. The information obtained from these assessments comprised analyses of milk recording data and treatment

records as well as animal based parameters assessed in the herds (e.g. body condition, locomotion, cleanliness and leg injuries). It was fed back to the participants and used as basic information for regular meetings of the Stable Schools. Within a 1-year cycle all group-members met once at each farm belonging to the group. The host farmer defined the agenda together with the facilitator, who guides the process but does not provide problem-related input, whereas the group members analyze and suggest changes regarding the farm-specific situation.

After one year, the implemented measures were evaluated and all participants were interviewed about their opinion on Stable Schools and the animal-based indicators used. The questionnaire to assess the farmers' view included open and closed questions to appraise this tool.

## Results

### Recommendations and subsequent implementation of measures

In the 20 Stable School meetings, in total 71 measures, i.e. the colleagues' recommendations to improve herd health, were found useful by the host farmers after the group discussions. The most common topics were metabolic health and feeding strategies (in total 23 recommendations), in particular possibilities to avoid subclinical ketosis in the early lactation (11 recommendations for 5 farms), and udder health (18 recommendations for 7 farms). Other areas dealt with by the Stable Schools were health of calves and young stock, fertility, lameness and claw health, and aggressive behavior, especially of horned cows, causing injuries and disturbance in the herd. For one farm the other members of the Stable School group did not provide advice because of a very good health situation; the peer farmers only suggested to maintain all existing preventive measures.

Out of all recommendations given by the group members about two thirds had been implemented within one year (completely or at least partly). 14 % of the recommendations were not possible to be implemented within the observation period but are expected to, e. g. timely harvest of forage in the next season to improve forage quality or construction work to improve housing conditions, whose realization takes some time.

### Farmers' opinions on Stable Schools

After completion of one round of Stable School meetings all farmers were requested to estimate the benefit of participation in the group for their farm. First, the participants were asked to rate the concept of modified Stable Schools on a scale of 1 to 5, with 1 being the best. The acceptance by the project farmers was very high: 13 times the concept was graded as very good (grade 1) and 7 times as good (grade 2).

**Table 1: Aspects considered as positive with regard to the indicator-based Stable Schools in the German pilot-study (n=53 responses from 20 farmers)**

	Number answers
Exchange of experiences in the group	9
Common search for practical solutions	8
Farm visits and external impulses	6
Preparation of indicators of herd health	5
Participants' openness in Stable School groups	5
Collaboration between farms with similar strategies	3
Reflection and challenge of farm-individual situations	3
Modules and concept of Stable Schools	3
„Free talking“ – exchange of information between the participants	2
Motivation and encouragement	2
Others	7

The participants liked the exchange of experiences in the group very much and highlighted the common search for solutions taking animal-based indicators into account. They also evaluated the self-determined approach in the Stable School concept as highly motivating (see Table 1). Suggestions for improvements of the concept (n=27) related among others to long distances between the farms of one group, skills of moderating the discussion, insufficient use of the provided health indicators by the group, too unspecific indicators, and time pressure in summer period.

## **Discussion**

Focusing on preventive measures, herd health plans (HHP) could be a helpful tool to optimize the health situation in organic dairy farms (Hovi et al. 2003). Several applied research projects showed the benefits of farm-individual HHP with regard to udder health and lameness (March et al. 2011, Brinkmann et al. 2009). The implementation of this management tool was feasible within the framework of applied research projects and well appreciated by the milk producers. However, at the same time it is rather cost-intensive because of its face-to-face approach (Brinkmann & March 2010). Modified Stable Schools promoting a common learning and development process towards a common goal could be a cost-effective alternative.

The effectiveness in terms of actual health improvements has not been investigated in our study yet (changes in health parameters after a 2-year phase will be assessed at a later stage of the project). However, the participating farmers showed a positive attitude toward Stable Schools and their compliance was high. The degree of implementation was similar to the level achieved in other intervention studies, partly with more input of the advisors/ scientists (cf. Brinkmann & March 2010, Green et al. 2007).

The main focus areas chosen by the farmers in our study are also similar to those reported in other studies (Brinkmann & March 2010, Ivemeyer et al. 2012). Ivemeyer et al. (2012) achieved a reduction in medicine use through animal health planning in 128 organic dairy farms in 7 European countries, either generated in Stable Schools or using face-to-face advice but following similar principles (e.g. guarantee farm-specificity, farmers' ownership, include a written plan based on the farmer's conclusions).

In the present study the participants highlighted the common search for solutions in the group, taking animal-based indicators into account and evaluated the self-determined approach in the Stable School concept as highly motivating. In particular the motivation is very important to achieve a high compliance in implementation of measures to improve animal health (cf. Green et al. 2007).

## **Suggestions to tackle the future challenges of organic animal husbandry**

Achieving and maintaining a good herd health status is an important aim in organic livestock farming and preventive concepts should be strongly encouraged. Since less a lack of scientific evidence but a lack of implementation of improvement measures accounts for sustained health problems, approaches that increase the motivation of farmers to implement measures should be emphasized. Stable Schools seem to be a promising tool, being regarded very valuable and fruitful by the participants.

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