Implementing IPM in strawberry production by utilizing demonstration farms and expansive learning

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Introduction

The implementation of IPM should take place by taking into account the local contingencies of individual farms that can be understood as activity systems. We argue that a localized developmental view based on the cultural-historical activity theory (CHAT) and expansive learning (1) can capture locally conditioned learning challenges to better understand the dependency of IPM implementation on conditions of individual farms. The EU directive 128/2009 represents a new rule for pest management activity of farms and involves the adoption of new tools and methods even a new conception of pest management. Depending on the level of previous IPM uptake by farms. We report here how the learning challenges associated with IPM implementation were studied in three strawberry farms and how the farms could be profiled in terms of their expansive learning actions during implementation of IPM elements new to the farms: a monitoring method for key pests, identification of the pests, use of bio-control and use of a demo-version of an IPM portal for delivering IPM guidelines and documenting IPM actions.

Methods 1: Organizing the research activity

2: Flower stalk analysis

3: Analysing expansive learning actions

Engesström et al. (2013)

Results and Discussion

The interviews lasted 1.5-2 h and contained 373-579 speaking turns. The distribution of ELAs in the discourse differed considerably between the farms (figure above).

- Farmer M implemented the new IPM elements only to a limited degree, and questioned critically the new monitoring method and his own agency. Identifying needs, problems and contradictions in the IPM and farming activity in general formed the majority of his ELAs. He struggled to decide which learning challenges to address. Learning on the experience from the trials and supported by the interventionist, M gradually crafted a crude new model of basic pest management that addressed both his short-term and long-term needs and gaps in pest management, including tools and information acquisition. This resulted in concrete actions in the next summer, e.g. he purchased a new spraying machine. The flower stalk analysis did not induce expansive learning actions from M.

- Farmer A approached IPM strategically: they wanted to improve marketing of their products by using it. Examining the given IPM model dominated their ELAs: they discussed the model in length critically and enriched the temporal aspects of monitoring. Outsourcing the monitoring for key pests became their consolidated solution after the project ended. A – as well as H – expansively discussed the results of flower stalk analysis.

The analysis of discursive expansive learning actions helped understand why the offered IPM elements either could or could not be incorporated in the activities of the farms, showing the influence of local contingencies on the farms’ ability to deal with the learning challenges when implementing IPM. Farms such as M particularly that face a multitude of problems can be better supported in their attempts to develop their activity on the basis of structuring their learning challenges with the analysis.

References:

www.mtt.fi

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