



Eco-innovations in forage production – step to sustainable agriculture in Bulgaria.

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Objectives

The objective of this study is to present some technological elaborations on seeds and forage production conducted at the Institute of Forage Crops, Pleven, focused on the possibility to adopt eco-innovations in Bulgarian fodder production as step to sustainability of the sector. Article provides some examples that eco-innovations in forage production and based on it stockbreeding have high economic, social and environmental effect and present idea that their implementation into the practice in stockbreeding systems could be more effective by close collaboration between science and practice.

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Main results: The results from the study show that there are a number of new technological solutions (eco-innovations) for increasing the sustainability of Bulgarian fodder production but their implementation into the practice goes slow.

Alternatives to chemical weed control: sowing forages under a cover crops or in a mixed cereal–legumes stand increase profitability by 12 to 30% (Dimitrova and Stoykova, 1999; Stoykova and Vasilev, 2007).

Use of new high productivity varieties of Lucerne: depend on inter-row spacing of stands sowing, nitrogen fixation from new Institute's variety Dara is about 245 kg/ha which induces a cost reduction of 212 euro/ha (Stoykova and Kertikova, 2008).

Inclusions of eco-innovations in chain fodder – animal's products: transfer of income on the chain "eco-forage production - animal output" shows that economically the most efficient alternative is to replace commodity production of forage by its inclusion in cattle breeding: in case of 6000 kg/ha forage yield net income of 2489 euro/ha was obtained and cost price of hay of 0.07 euro/kg. The inclusion of eco forage produced in the internal cycle of consumption in sheep breeding gave a net income of 625 euro/ha and 61.76% profitability. (Stoykova and Kirilov, 2008).