



Media Release

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AgEng Congress 2014: More Efficient Use of Resources thanks to Agricultural Engineering

How does agricultural engineering affect people, animals and the environment? How can technologies be further optimised for the benefit of improved resource efficiency? These questions will be tackled by around 350 individuals from science and industry at the Congress of the European Society of Agricultural Engineers, taking place for the first time in Switzerland from 6-10 July. The Society will be celebrating its 30th anniversary.

‘The AgEng2014 Congress is an outstanding example of the vital importance of networking agricultural research, both nationally and internationally’, explains Bernard Lehmann, Director of the Federal Office for Agriculture, speaking of the Agricultural Engineering Congress 2014 at the Swiss Federal Institute of Technology (ETH Zurich). The topics addressed will range from energy and emissions, to land management and information and communications technology, to ergonomics and safety issues. ‘We are taking advantage of the opportunity to provide an international audience with an understanding of both the Swiss farming sector – with the special demands it makes on agricultural engineering – and the achievements of agricultural engineering research’, says Robert Kaufmann, President of the European Society of Agricultural Engineers (EurAgEng) and Head of the Agricultural Economics and Engineering Research Division at Agroscope’s Institute for Sustainability Scienc-



**Developed by Agroscope and only recently available on the market, this device controls broad-leaved dock in an efficient, ergonomic and eco-friendly manner.
(Photo: Agroscope)**



es ISS. 'EurAgEng's remit is essentially the promotion of all scientific activities in agricultural engineering, as well as cooperation with the industry. One particular concern is to impress decision-makers and society with the importance of agricultural engineering solutions. '

Numerous examples show how better technologies and knowledge can optimise production systems and promote the sparing use of resources. Mulch and direct-sowing systems, for instance, are common in Switzerland. Strip-seeding is a technique developed in Switzerland that ensures reliable maize yields and efficient soil protection. Controlling *Rumex obtusifolius* (broad-leaved dock) with hot water is a breakthrough, especially for organic farms. Newly available on the market, the device developed by Agroscope controls broad-leaved dock in an efficient, eco-friendly and ergonomic manner.

Agricultural engineering issues are also of key importance in livestock farming. Species-appropriate housing systems, good milk quality and milking technique as well as the reduction of climate-impacting emissions in barn and field are some of the watchwords in this context. Moreover, in order to optimise production systems, a farm-management approach geared to sustainability is pivotal. Among other things, Agroscope is developing software tools for calculating the risk of soil compaction, for the precise calculation of machinery costs, and for operational planning.

Major advances in the fields of electronics, mechatronics and data management are changing the face of agriculture. These new possibilities allow us to organise production in an increasingly eco-friendly and efficient manner. Developments such as 'seeing sprayers' that only treat a particular weed and unmanned tractors are probably on the horizon.

Further information on the Congress and the examples mentioned in the text:

- AgEng Congress 2014 website: www.ageng2014.ch
- EurAgEng website: www.eurageng.eu
- Controlling broad-leaved dock with hot water: www.black.ch
- Simulation model for calculating soil-compaction risk posed by the use of agricultural vehicles: www.terranimoch
- Calculation of machine costs: www.maschinenkosten.ch
- Software tool for operational planning: www.arbeitsvoranschlag.ch

**Contacts:**

Dr. Thomas Anken, Head of the Agroscope Agricultural Systems Engineering and Mechatronics Research Group, Institute for Sustainability Sciences ISS, Tänikon 1, CH-8356 Ettenhausen, Switzerland
thomas.anken@agroscope.admin.ch
+41 (0)58 480 33 52

Ania Biasio, Media Service
Corporate Communication Agroscope CCA
Reckenholzstrasse 191, CH-8046 Zurich, Switzerland
ania.biasio@agroscope.admin.ch
+41 (0)79 878 67 74

www.agroscope.ch