Presseinformation des Julius Kühn-Instituts, Bundesforschungsinstitut für Kulturpflanzen
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More colourful fields for biogas production

New project at Julius-Kühn-Institute looks at the potential of pearl lupin as bioenergy crop

Groß Lüsewitz (13.3.2014): **A new research project is about to start at Julius-Kühn-Institute (JKI) investigating the potential use of pearl lupin (Andenlupine) as new bioenergy crop. With a long-term perspective, this South American plant shall be used complimentary to corn in biogas production. The German Agency of Renewable Resources (FNR) will financially support the project for the next three years in order to explore the performance of the crop under local growing conditions.**

As the crop is new on fields in Germany, biomass production of pearl lupin (*Lupinus mutabilis)* will be compared to biomass production of white lupin (*Lupinus albus)* and blue lupin (*Lupinus angustifolius*) in a first step. White and blue lupin both originate from the Mediterranean area and are already cultivated in Germany. The task is now to identify those lupin varieties in the current range which deliver high biomass yields. “We have already done preparatory work”, says Dr. Steffen Roux. The project co-ordinator who is working at JKI in Groß-Lüsewitz refers to results of pre-trials revealing the high biomass potential of the pearl lupin. “Blue and white lupins, however, are susceptible to anthracnose, a fungal disease. We want to find out whether pearl lupins are equally affected as part of our project.”

The joint research project is divided into two parts. JKI will assess the performance, evaluate the susceptibility to anthracnose and select promising crop candidates (project part 1, **funding code: 22402111**). Project partners from the University of Rostock will evaluate methane yields (project part 2, funding code: 22407312). http://www.fnr.de/projekte-foerderung/projekte/suche/

Establishing an additional bioenergy crop would lead to more diversified cropping sequences on German fields, in turn leading to better soil structure and higher organic matter contents. Growing a nitrogen-fixing legume such as lupin would help to reduce the application of nitrogen fertilisers. The succession of bioenergy crops would become more sustainable.

Background information on pearl lupin:
The pearl lupin belongs to the lupin species (*Lupinus*) within the family of Fabaceae, or legumes. The plant mainly grows in the Andean countries Bolivia, Peru and Ecuador. Harvested seeds serve as food, but also contain poisonous bitterns, the alkaloids. Before the seeds can be eaten, they have to be rinsed or watered several times. The seeds have a high protein and fat content and are rich in lysine, an essential amino acid.

Two pictures are available on the media pages of JKI just underneath the press release for download: http://www.jki.bund.de/de/startseite/presse.html

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