

**POLICY DOCUMENT OF THE UFOP BOARD OF DIRECTORS  
ON THE PROMOTION OF NATIVE GRAIN LEGUMES**

On occasion of its meeting on 5th September 2005, the UFOP Boards of Directors called for more financial incentives for the cultivation of native grain legumes in order to

- reduce import dependence on the supply with proteins,
- increase the bio-diversity in the range of crop plants,
- integrate them in crop rotation to reduce the intensity of production, in particular as a functional substitution crop for the expensive stubble wheat,
- retain and increase the output of tillage systems in German agriculture by mulch / direct seed processes,
- reduce the problems of resistance in case of diseases and grass weeds within the framework of pest control and in dependence of tight crop rotation.

The special significance of grain legumes in cultivation and processing has to be observed more in practical agriculture. The advantages of these leaf crops are utilised much too little to permit the plant production to be optimised.

The crop area of native grain legumes, such as broad beans, field peas and blue lupine (sweet lupine), has decreased by about 30,000 hectares (-14 per cent) in cultivation year 2004 compared to 2003.

In the harvest of 2005, the native grain legume species mentioned lost in significance again (-4 per cent), and were cultivated only on a surface of all-in-all 165,700 hectares.

In the seed production filed for field inspection, a drastic decrease in area was revealed in the middle of July 2005 totalling 44 per cent in case of field peas, 36 per cent in case of broad beans and 49 per cent in case of blue lupines.

At present, another strong narrowing of crop rotation can be established whereby the cultivation of winter wheat is covering ever larger crop areas. During the last two years its share increased by 8 per cent to 3.15 million hectares for harvest in 2005 all over Germany. A year previous, the increase by 135,000 hectares already covered a larger area than the entire current cultivation of field peas in Germany, and for the first time exceeded the 3 million hectare mark.

The farmers reacted to the economic situation in agriculture, which was further aggravated by a de-coupling of production by agricultural policies, by further narrowing crop rotation because crops with higher contribution margins are cultivated increasingly without consideration of the pioneer crop effects of other crops. Winter wheat, in particular, profits from this trend, the expansion of cultivation area of which is carried out as stubble wheat almost exclusively, thus causing an increase in agricultural pesticides and mineral-based nitrogen fertilisers.

The previous bonus systems are not sufficient to stop the negative trend for the grain legumes. Moreover, the additional bonus to the amount of EUR 55.57 per hectare is only paid for a maximum surface of 1.6 million hectares as stipulated in EU-25. Up to now the second stage of the agricultural environment programme has not produced a sufficient incentive for the cultivation of protein-bearing crop.

A comprehensive support programme is required with varied measures

- to promote breeding,
- to promote cultivation,
- to promote processing and marketing.

In crop rotation, grain legumes have indisputable advantages:

- self-sufficiency in nitrogen from the air through symbiosis with root-nodule legume-inoculating bacteria, whereby part of this nitrogen is available to the follow crop;
- interruption of grain-rich crop rotation and thus of chains of infection;
- improvement of the soil structure, break-up of compactions (primarily by broad beans and lupines);
- safe set-up of ploughless soil treatment processes by mulch and/or direct sowing;
- digestion of phosphates deposited in the soil (lupines);
- improved possibilities of safe weed control within and between crops by changes between spring wheat and winter wheat as well as leaf and grain crop;
- avoidance of resistances forming in case of diseases and grass weeds;
- levelling out of work peaks, reduction of working hours, more efficient utilisation of mechanical appliances;
- easier soil tillage by machines, thus saving fuel;
- and finally: production of native protein-rich raw materials for animal feed and human nutrition. The latter, in particular, is gaining significance in case of sweet lupines.

The fact that despite of these obvious advantages and the continuously high deficit between production and consumption (EU-15 2003/04: 78 per cent  $\approx$  50 million tons of soybean wholemeal equivalent) the area under cultivation is decreasing, is caused primarily by the low producer prices for native grain legumes, which does not adequately represent the value of these crops in the value chain. Potentials are given away in plant as well as animal production. The use of native grain legumes for animal fodder, in particular, requires the analysis of all necessary costs (full cost analysis) accruing in the interconnected system of crop growing and animal farming.

The strong expansion of soybean cultivation in South America in particular gives rise to the expectation that the framework conditions for the cultivation of native grain legumes will not improve in the medium term.

Stepping up the promotion of native grain legumes would lead to a loosening up of the rotation of crop, thus producing the correspondingly positive effects on the environment:

- less outlay for fertilisers and agricultural pesticides;
- more options for safe weed control in the entire system of cultivation;
- improvement of the soil structure;
- safe set-up of cost-saving processes in soil management by mulch / direct sowing processes;
- less demand in non-renewable energy resources;
- a contribution to the reduction of global greenhouse potential.

Fundamentally, the operating revenues of farmers must not drop any further, which consequently involves the creation of the necessary financial incentives as a pre-requisite for the improvement of the attractiveness of cultivating grain legumes. The native grain legumes of broad beans, field peas and sweet lupine are able to provide the value requested by society and the environment, apart from their actual plant production.

A diversification of crop rotation is sensible and should be carried out with plant species, which

- supply local vegetable protein and reduce the big deficit between consumption and production,
- relieve the environment by a decrease in mineral nitrogen,
- ensure sustained yield and potency of soils,
- reduce the production intensity in the system of an extended crop rotation.

Moreover, the decrease in the cultivation area of grain legumes will coincide with an increased use of follow-up seeds for economic reasons. This will inevitably lead to a reduction in the intensity of breeding these crop plants. At this point, reference only shall be made to the consequences for ecological agriculture which is dependent on the biological nitrogen fixation by the legumes.

At present, there is only one single breeding programme for peas, broad beans and sweet lupines in Germany. Other programmes have been given up in the past already, such as two breeding programmes for field peas and sweet lupines at the beginning of 2005. The still existing breeding programmes are threatened with the same fate, as the so-called “critical mass” in the cultivation extent will no longer be achieved in the short term. As breeding programmes are planned over a very long period of time and a discontinuation cannot be revised at short notice, know-how and job potentials will be lost in Germany for a long time.

Berlin, 5th September 2005