



## Anwendungsbericht/User Application Report

**Produkt/Product:**

penergetic k  
penergetic p Bentonite and Molasses

**Fachberater/Consultant:**

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**Anwender/User:**

Karl Munz  
88374 Hosskirch/Germany

**Datum/Date:**

2012-2013

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### Application on Malting Barley and Corn in Germany

Karl Munz has 20 ha pastureland and 28 ha cropland, divided in 14 ha for corn and 14 ha for cereal crop. He has been using Penergetic products since 2012.

- - 40% mineral fertilizer 15/15/15
- - 20% herbicides
- - **30% costs compared to 2011**
- **+ 12% yield**

### Malting Barley 2013

Previous crop was corn (soil and plants treated with penergetic in 2012). Stubble treatment only with disc harrow and autumn greenery. Spring 2013 was very wet, therefore no manure fertilization or ploughing.

### Applications

- 150g/ha penergetic b in spring
- 300g/ha penergetic p + 50ml/ha penergetic p Molasses combined with herbicides
- 250g/ha penergetic p + 50ml/ha penergetic p Molasses combined with fungicides

## Results barley 2013

	Yield *100kg	Ø Region	Full Barley	Ø Region	Remarks
<b>Malting Barley</b>	<b>57</b>	<b>50</b>	<b>92.5</b>	<b>86</b>	<b>Compared to region :</b> <b>Full Barley +8%</b> <b>Yield +12%</b> <b>Costs -30%</b>

## Corn 2013

**Variety:** Bombastic  
**Previous crop:** Wheat (soil and plants treated with penergetic in 2012)  
**Stubble treatment:** ploughing, autumn greenery

Spring 2013 was very wet. Soil fertilization with 24m<sup>3</sup> manure plus 220kg underfoot fertilizing 20/20/20, 20% reduction of herbicides.

## Results corn 2013

- - 40% of mineral fertilizer
- - 20% of herbicides
- - **30% of costs compared to 2011**

Spring was too wet, summer too dry, but compared to other stocks in the region corn developed regularly and constantly. This showed mainly in formation and extraordinary size of corncobs.

## Further observations

The cultures stand stress situations better than formerly and regenerate quickly.

Pastureland: Although there was no fertilization neither in autumn 2012 nor in spring 2013 due to weather situation, performance was absolutely satisfying. Sorrel and common panicle decreased, higher species diversity observed, very fast growth after cutting, quality of grass improved visibly.

In 2014 there will be a change to biological cultivation. Due to the positive experiences, additional penergetic p treatments will be given after weather stress.

## Conclusion

Quality, quantity, stress resistance of plants, costs-benefit – all very positive. It is a good feeling to be able to work future-orientated. Penergetic supports me in this regard.