

Biodynamic carrot growing - an inventory*Michael Fleck¹, Ingo Hagel², and Peter von Fragstein¹*¹ *University of Kassel, Department of Ecological Agriculture
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Biodynamic carrot cultivation was investigated on two levels: comparison between bio-dynamic and conventional practice (i) through interviews with 45 biodynamic and 18 conventional farmers about agro-technical aspects and (ii) qualitative analyses of carrot samples of the same entity harvested in 1996. In total 80 samples from mainly south German farms were assessed by biochemical measurements, sensory panels, and storage trials. The results of the evaluated interviews can be summarized as follows:

The majority of biodynamic carrot growers decided on the organic lines³ *Rothild (Rothild Bgh)* and *Lange Rote Stumpfe (LRSt Bgh)* from the **Seed Initiative Bingenheim** (32 of 58 samples). In contrast to this only 3 hybrids were grown. Carrots were cultivated on sandy and on clayey soils, but mostly on loamy soils. A site adopted choice of cultivars could be found: *Nantaise* types more on light soils, *Rothild* (Company HILD) more on loamy soils. Green manure preceding to carrots was seldom found. On sandy soils cultivating frost-susceptible catch crops were most common after cereals. The growing period of carrots was mostly between end of April and mid of October. Ridge cultivation of carrots was found relatively seldom.

Manure application was most common (80 %) to the preceding crop. The composted farmyard manure commonly had an age from 5 to 8 months, the mean application rate was 23 t ha⁻¹. The biodynamic field preparations were used in all cases, the frequency of application was higher for Horn silica compared to Cow-horn manure. This may be an indicator – except for DEMETER standards – for the extreme importance that is attached to the former spray preparation among biodynamics for the purpose of well ripened fruits.

The average yield level in 1996 was found at 48 t ha⁻¹ which exceeded the long lasting average to a high extent. The harvest on loamy soils was best yielding 57 t ha⁻¹. This is shown in table 1 below. Most of the farms used natural cellars, cooling chambers or cold stores as storage facilities. Stockpiling in heaps like potato pits were rarely found as well as leaving the roots in the field for continuous spring harvesting.

Tab. 1. Yield of carrot taproots [t*ha⁻¹ FM] depending on cultivar and soil texture according to farmers' statements

	sandy soil	loamy sand	loamy soil	clayey soil	average	
<i>Rothild (Hild)</i>	-	50	60	38	53	b^s
<i>Rothild (Bgh.)</i>	37	42	63	46	49	b
<i>LRSt (Bgh.)</i>	-	60	53	-	55	b
<i>Nantaise</i>	20	30	-	-	27	a
<i>other</i>	-	50	35	-	43	ab
average	31 A	44 A	57 B	43 A	48	

^s: Different letters indicate significant differences based on LSD at $\alpha=0.05$ **Bibliographische Angaben zu diesem Dokument:**

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Biodynamic carrot growing - an inventory. Beitrag präsentiert bei der Konferenz: IFOAM 2000 - The World Grows Organic, 13th International IFOAM Scientific Conference, Convention Center Basel, 28.-31. August 2000; Veröffentlicht in Alföldi, Thomas und Lockeretz, William und Niggli, Urs, (Hrsg.) Proceedings 13th International IFOAM Scientific Conference, Seite(n) 191. IOS Press.

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