

# Iodine supplementation with iodinized salt in dairy cows: effects on iodine concentration in milk and blood plasma

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- Iodine.

Trace element of importance.

production of thyroid hormones.

involved in the basal metabolism

in the development of organs

Milk: source of iodine for consumers.

f.e. up to 50% of the requirements.

53  
I  
126.9



- Iodine content is low in locally produced feedstuffs.

- Requirements: 0.4 - 0.8 mg/kg DM

grazed grass n=39      0.24 mg/kg DM

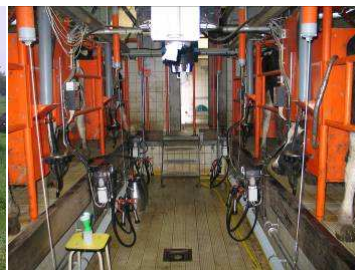
grass silage n=11      0.26 mg/kg DM

maize silage n=3      0.09 mg/kg DM



- Aims:

assess the effects of iodinated salt on  
iodine content in milk and blood plasma



- Materials

Two groups of 24 cows

Similar mixed diet

grass silage 5.8 kg DM

maize silage 5.8 kg DM

compound feedstuff 9 kg

Soja bean meal (0.225), barley (0.225),  
sugar beet pulps (0.225), bran (0.225),  
deshydrated lucerne (0.10)

No iodine in the teat dip



Periods	Control group	Iodinized group
Before	50g salt	
d1 – d59	100g salt + 5mg Se	100g salt + 50mg I + 5mg Se
After	100g salt + 5mg Se	100g salt + 5mg Se
Content		
Iodine	0.3 mg/kg DM	0.3 + 2.5 = 2.8mg/kg DM
Selenium	50 + 250 = 300mg/kg DM	50 + 250 = 300mg/kg DM
Iodine was supplemented as potassium iodide		

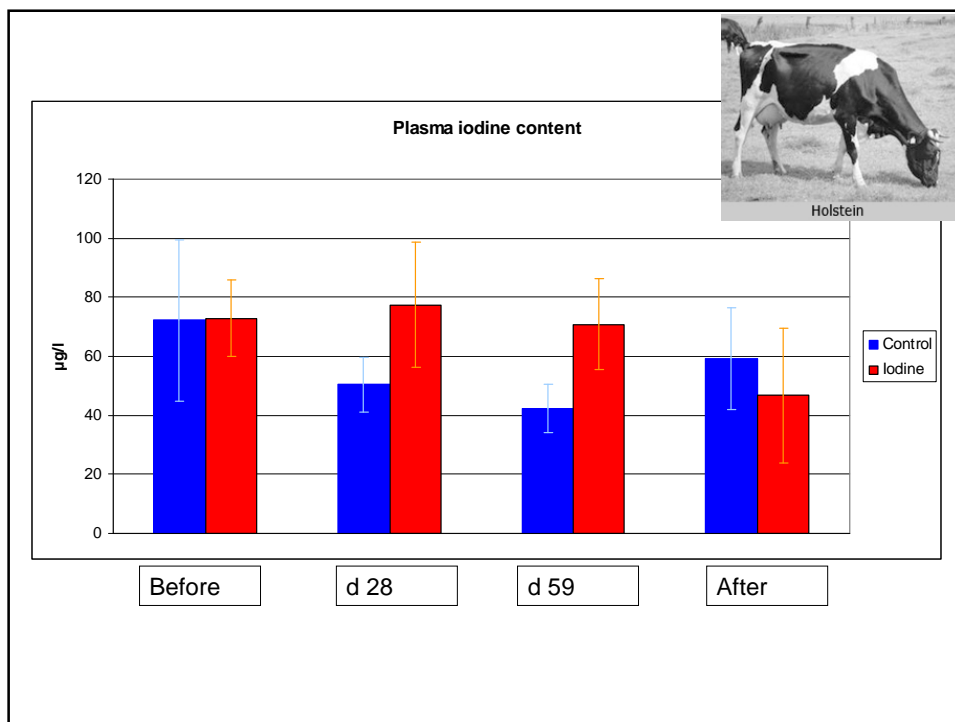
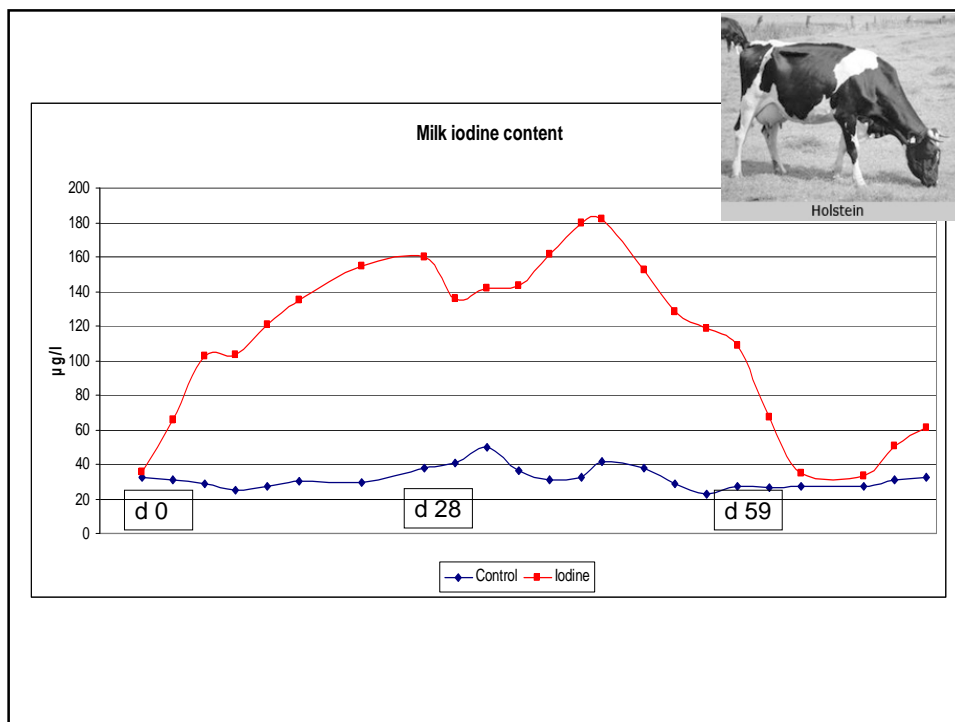
## Measurements

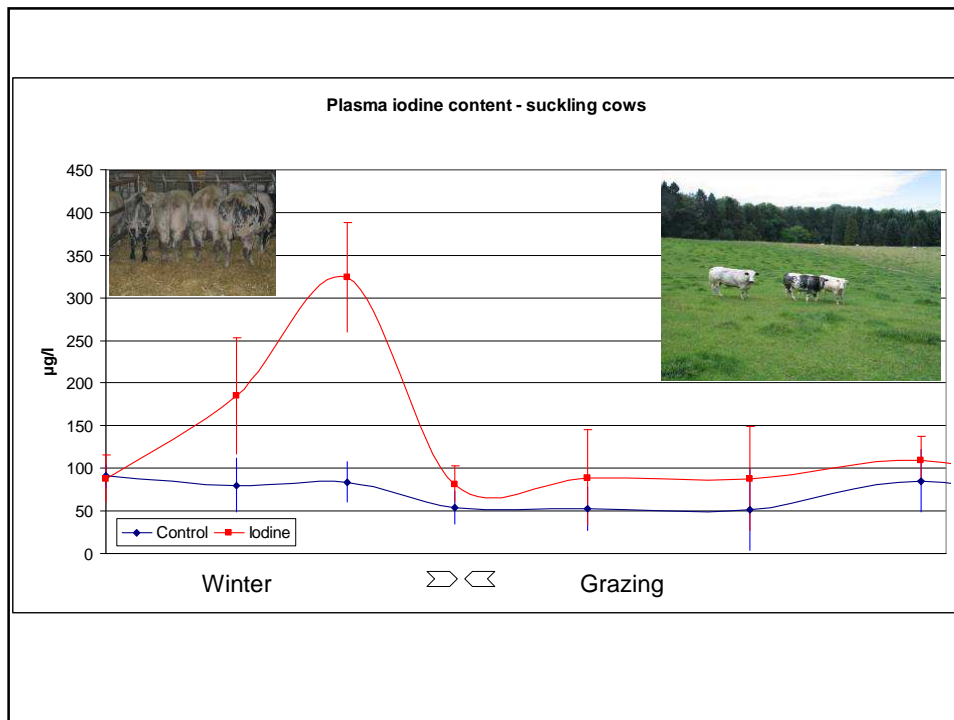
- Iodine in milk from the tank
- Iodine in plasma of 2 x 10 cows
- Milk yield and composition



## Results Milk: no effects

		Control group	Iodinized group
Before	Yield kg	30.8	
	Fat g/l	43.5	
	Prot g/l	33.6	
d1 – d59	Yield kg	26.8	26.2
	Fat g/l	42.2	42.0
	Prot g/l	32.4	32.6
After	Yield kg	25.7	25.2
	Fat g/l	41.6	41.5
	Prot g/l	32.5	32.7





## Conclusion

- Iodine supplemented as potassium iodide at a rate of 50mg I per day largely increased iodine content in milk.
- Milk could therefore be considered as a product with added value for the consumers