



Pear Production System Innovation: First results

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Dutch case: pear production on calcium-carbonate containing clay soil

Standard:

restricted
max. input:
65 kg P₂O₅



Broadcast P-fertilizer:
Input: 65 kg P₂O₅

result

P-uptake efficiency:
P-leaf: 0% increase

P-effect on production or
quality: non

Innovation:

restricted
max. input:
65 kg P₂O₅



27 ton/ha compost
input: 50 kg P₂O₅
(50% = 25 kg P₂O₅ counted)



Foliar P-fertilizer:
input: 40 kg P₂O₅

result

Effect on earthworm activity*
No P-effect

P-uptake efficiency foliar P:
P-leaf: 29% increase

Foliar P-effect:
fruit firmness after 8 month
storage 15% higher

* Separate trial:

Effect of timing compost application (higher amounts) on earthworm population:

System	April 15, 2013 (65 ton compost/ha February 20, 2013)		November 5, 2013		October 25, 2014 (37 ton compost/ha June 25, 2014)	
	# earthworms /m2	% juvenile	# earthworms /m2	% juvenile	# earthworms /m2	% juvenile
Standard	264 a	90	72 b	51	112 ab	59
Innovation	80 b	83	100 ab	39	248 ab	56

Possible explanation: lower soil temperatures because of isolation after compost application on February 20 2013 result in lower earthworm numbers in April 2013; application later in the summer in 2014 (June 25) may have led to higher numbers later in the season.

