

# PENTAKEEP-V

The effect of **PENTAKEEP-V** to leaf vegetables

 **COSMO SEIWA AGRICULTURE CO., LTD.**

## Spinach(soil cultivation)

**PENTAKEEP-V**

**Crop** : Spinach(*Brassica rapa* L.) "Platon" (for fabricate)  
**Test place** : Experiment station, Japan  
**Cultivation** : The size of plot is 16.2m<sup>2</sup> (1.9m x 8.5m).  
5cm each stocks;  
Fertilizer:(N 21kg, PO<sub>4</sub> 35kg, K 21kg)/10a  
**Application**: Concentration of PENTAKEEP-V,  
0.02%; Spray volume, 300 L/10are. 5  
times to foliar treatment in each 10 days  
(from Feb. to Mar., 2004).  
**Harvest** : 1st-Apr, 2003

**Advantageous effect** :

- The application of PENTAKEEP-V causes lengthen of stem and amount of yield increased.
- Investment for spinach was ¥3,300/10are (in Japan).



Table Effects of PENTAKEEP-V on spinach

	stem length	expectation of yield	
	(cm)	(kg/10a)	(%)
control (none)	33.1	2,400	100
PENTAKEEP-V	37.8	2,800	117

# Spinach (hydroponics)

**PENTAKEEP-V**

**Crop** : Spinach “Joker”  
**Test place** :Fukushima, Japan  
**Cultivation** :NFT hydroponics system;  
**Application**: Concentration of PENTAKEEP-V, 0.01 %, for 700 liter water. The beds are 100m long and also the beds without treatment are same length.  
**Harvest** : 13-Sep. 2004

**Table Effects of PENTAKEEP-V on the spinach**

	plant			length of leaves cm	colour of leaves *2
	fresh weight g	dried weight g	dried percentage %		
Control (None)	18.0	0.82	4.52	23.2	27.0
PENTAKEEP-V	26.4	1.28	4.83	23.3	28.1
	**	**	**	ns	ns

\*Z; Color of leaves are measured by “ Minolta SPAD-502”

Ns, \*\* means no significantly different and P<0.01



**Fig. Bed before application of PENTAKEEP-V**



**Control (None)**  
Long poor leaves and stock



**0.01%PENTAKEEP-V**  
Round and abound



**5 stocks ( in 1 hole).**  
Volume is apparently different.



**Volume of 30 stocks.**

**Fig. Effect of of PENTAKEEP-V treatment**

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## Raising good seedling (Lettuce)

**PENTAKEEP-V**

**Crop** : Lettuce (*Lactuca sativa*)“Red Fire“  
**Test place** :Tochigi, Japan  
**Cultivation** : soil cultivation; comparing 128 plants for each assumption;  
**Application**: Concentration of PENTAKEEP-V, 0.016 %, 0.032 %, 0.078%; mixed in water till 16-Jun., other term mixed in culture; 5 times of watering in each 5 days (4-Jun to 24-Jun).

**Harvest** : 27-Jun, 2004

**Advantageous effect** :

- Seedling become better in order of density 0.032 %, 0.078%.
- Seedlings become more massive and strong colored.

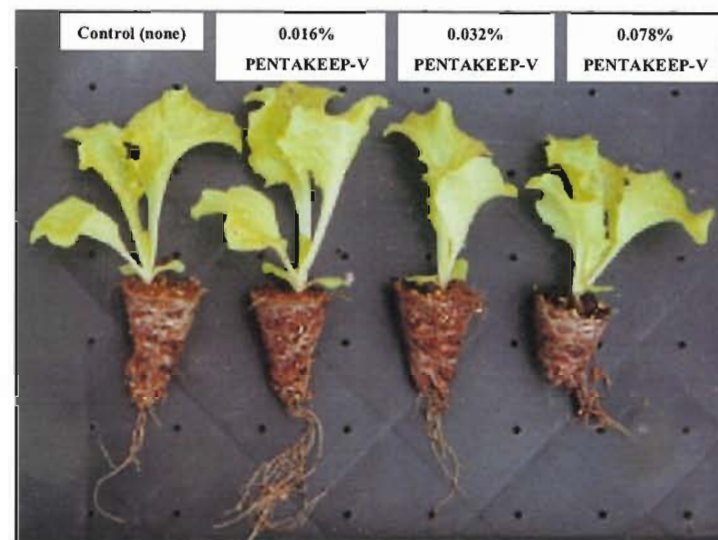
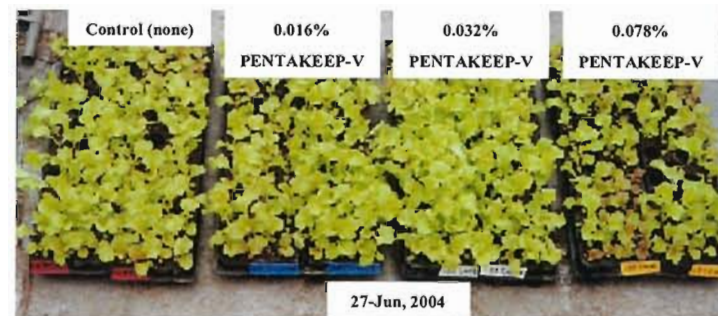


Table Effects of PENTAKEEP-V on lettuce

	dried plants(g)		
	on the ground	underground	total
control (none)	0.051	0.024	0.075
0.016% PENTAKEEP-V	0.052	0.020	0.072
0.032% PENTAKEEP-V	0.062	0.021	0.083
0.078% PENTAKEEP-V	0.057	0.018	0.075