

藥本 (Angelica tenuissima NAKAI)의 栽培法 確立에 關한 研究

II. 栽植密度斗 施肥量이 藥本의 生育 및 收量에 미치는 影響

江原道農村振興院. 崔銀玉, 徐貞植, 鄭柄贊, 姜哲煥, 許範亮

Studies on the Establishment of Cultural Practice for Angelica tenuissima NAKAI

II. Influence of Planting Density and Fertilizer Level on Growth and Root Yield of

Angelica tenuissima NAKAI

Kangwon P.R.D.A E.O. Choi, J.S. Seo, B.C. Jeong, C.W. Kang, B.L. Huh

(試驗目的)

生藥 및 製藥原料로 鎮痛, 鎮痙, 發汗, 消腫 等의 藥理作用을 갖는 藥本에 對한 道正 栽植密度斗 施肥量을 究明하여 栽培法을 確立하고자 함.

(材料 및 方法)

- 供試材料: 1年生種根
- 栽植密度: 1988 - 30 × 100cm (33,300株/10a), 30 × 15 (22,200), 30 × 20 (16,600)
1989 - 30 × 50cm (66,600), 30 × 10 (33,300), 30 × 15 (22,200)
- 施肥量: N-P₂O₅-K₂O = 0-0-0, 4-3-3, 8-6-6, 12-9-9 kg/10a
- 定植期: 11月上旬
- 試驗場所: 春川
- 試驗日配置: 分割 3 反復.

(結果 및 考察)

1. 出現 및 開花期는 栽植密度斗 施肥量間에 差異를 보이지 않았다.
2. 單長은 密植일수록 큰 傾向이였으며 施肥量間에는 N, P₂O₅, K₂O 6 kg/a 施用이 가장 컸고 葉數는 密植일수록 減少傾向이였으나 施肥量間에는 大差없었다.
3. 根莖, 根長, 支根數 等은 密植일수록 減少傾向이였으나 施肥量에는 差異가 없었으며 株당根量에 있어서는 差異를 보여 密植에서 減少傾向을 보인 반면 施肥量間에는 N, P₂O₅, K₂O 6 kg/a 施用이 무거웠다.
4. 生根收量은 慣行栽植密度인 30 × 20cm 보다 密植條件인 30 × 10cm 에서 最高收量은 나타내었으며 施肥量間에는 N, P₂O₅, K₂O 6 kg/10a 施用에서 2년 平均 1,009 kg/10a 의 收量性으로 最高收量을 나타내었다.

Table 1. Changes of growth characteristics according to different planting density

Year	Planting density	Emergence date	Flowering date	Days to flowering	Plant height	No. of leaves
1988	30x10cm	4.23	8.7	107	48.6	8.1
	30x20	4.24	8.8	107	46.4	9.7
	30x30	4.25	8.8	106	41.9	10.6
1989	30x5	4.19	8.8	111	40.9	9.8
	30x10	4.20	8.8	110	40.3	10.8
	30x15	4.21	8.8	109	39.0	12.6

Table 2. Changes of growth characteristics according to different fertilizer level

Fertilizer level	Emergence date	Flowering date	Days to flowering	Plant height	No. of leaves
0-0-0	4.22	8.7	108	40.0	10.1
4-3-3	4.22	8.8	108	42.8	9.8
8-6-6	4.22	8.8	109	45.7	10.9
12-9-9	4.22	8.8	109	42.9	10.2

* Fertilizer level : N -P₂O₅ -K₂O

Table 3. Effect of planting density on the root characteristics after harvest.

Year	Planting density	Root weight (g)	Root length (cm)	Root diameter (cm)	No. of supporting root/plant
1988	30x10cm	28.7	26.8	1.9	2.9
	30x20	30.7	27.1	2.0	3.3
	30x30	39.0	28.0	2.2	3.6
1989	30x5 cm	35.1	27.2	2.1	6.9
	30x10	44.8	26.7	2.1	7.0
	30x15	37.2	27.4	2.1	6.5

Table 4. Effect of fertilizer level on the root characteristics after harvest

Fertilizer level	Root weight (g)	Root length (cm)	Root diameter (cm)	No. of supporting root/plant
0-0-0	33.0	27.4	2.0	5.0
4-3-3	32.4	26.6	2.0	4.9
8-6-6	40.3	27.2	2.1	5.1
12-9-9	37.9	27.6	2.1	5.0

* Fertilizer level: N -P₂O₅ -K₂O

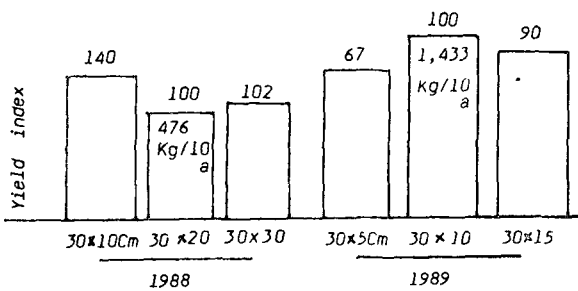


Fig.1. Effect of planting density on the fresh root yield.

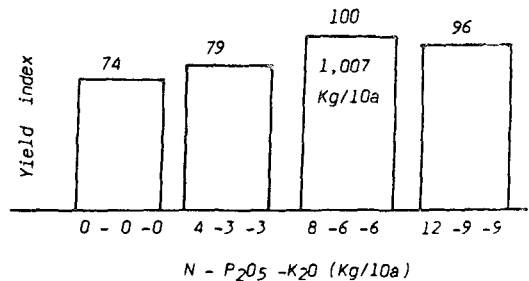


Fig.2. Effect of fertilizer level on the fresh root yield