

Yield Comparison of Vegetable Peanut according to Early and Late Seeding in Southern Region of Korea

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Objectives

To evaluate the characteristics on growth and yield of vegetable peanut according to early and late seeding, and get the basic data for breeding and cultural practice of vegetable peanut.

Materials and Methods

- Cultivar : Iksan 11, Palkwang, Shinnamkwang, Daepung, Satonoka, Namkwang (Virginia type)
Jokwang, Daekwang, Daeyang, Mikwang, Milyang 9, Daeshin (Shinpung type)
- Methods
 - Seeding date : April 25(Early seeding), June 20(Late seeding).
 - Standard planting density : (40+60) / 2 × 25 cm (8,000 plant/10a) by vinyl mulching
 - Fertilizer as basal dressing : N-P₂O₅-K₂O-Ca(OH)₂ = 3-14-10-100 per 10a

Results and Discussion

- The effective flowering day to set mature pod was until about 25 days after flower beginning in early seeding, 14 days in late seeding. In early seeding, Shinpung type showed more early pod setting than Virginia type.
- Double density in early seeding was effective in cultivars such as Daepung, Satonoka and Iksan 11 in Virginia type, Mikwang and Daeyang in Shinpung type, but in late seeding, there was no effect except Milyang 9.
- Heavier fresh pod weight digging at 70 days after flower beginning made more fresh pod yield than digging at 85days. But grain weight per pod and grain yield in 85 days had much higher than those in 70 days. This grain filling in late maturing stage may be affected by temperature condition, particularly in late seeding.

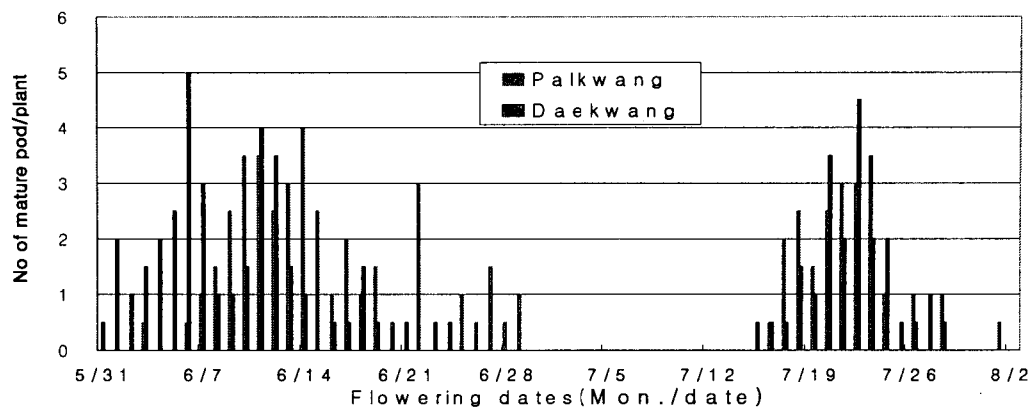


Fig 1. Distribution of the number of matured pods as affected by flowering time

Table 1. Effect of planting density on fresh pod yield of peanut

Plant type	Cultivar	Sown in April 25			Sown in June 20		
		RD*(A)	Double density(B)	Index (B/A)	RD*(A)	Double density(B)	Index (B/A)
Virginia type	Iksan 11	673b**	723b	107	459c	441b	96
	Palkwang	725b	706b	97	586bc	481b	82
	Shinnamkwang	843ac	779ab	92	727a	567ab	78
	Daepung	684b	791ab	116	571bc	576ab	101
	Satonoka	731b	804ab	110	568bc	576ab	102
	Namkwang	882a	694bc	79	621ab	575ab	93
	Mean	756A	749A	99	589B	536B	91
Shinpung type	Jokwang	666b	577c	87	550bc	463b	84
	Daekwang	692b	711b	103	504c	472b	94
	Daeyang	698b	759ab	109	631ab	517b	82
	Mikwang	655b	852a	130	617b	599ab	97
	Milyang 9	761ab	691bc	91	586bc	665a	114
	Daeshin	768ab	738ab	96	552bc	534b	97
	Mean	707A	721A	102	573B	542B	95

* Recommended density(RD), 8000 plants/10a; double density, 16,000 plants/10a.

** Means with different letters within the same column are significantly different at 5% level by DMRT.

Table 2. Effect of digging time on fresh pod yield of peanut in two seeding dates.

Seeding date	Digging time	Plant type	Mature pod (no/plant)	Fresh pod wt. (g/pod)	Dry pod ratio (%)	Mature pod wt. ratio (%)	100 grain wt. (g)	Yield(kg/10a)	
								Grain	Fresh pod
Apr. 25	70 day*	VB**	31	3.31	43	83	55	223	748
		SH	33	3.01	47	86	57	251	754
		Mean	32	3.16	45	84	56	237	751
	85 days	VB	35	2.85	58	93	80	321	756
		SH	34	2.73	61	94	72	312	707
		Mean	35	2.79	60	93	76	317	732
June 20	70 days	VB	30	3.28	38	94	64	196	746
		SH	30	2.79	42	96	58	187	656
		Mean	30	3.04	40	95	61	191	701
	85 days	VB	26	2.93	52	91	70	219	589
		SH	28	2.71	53	93	61	214	573
		Mean	27	2.82	52	92	66	217	581

* 70 days : Digging at 70 days after flower beginning, ** VB : virginia type, SH : Shinpung type