

Comparison with cultivation area to the rice yield and quality to according to the ecological type and transplanting times

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Objectives

To strengthen quality competitiveness and commercialization and to produce high quality it was carried out comparative experiment of the yield and quality between the cultivated area according to ecological cultivar types and transplanting times in rice

Materials and Methods

- Examination location : Plain area(Kimje), Intermediate area(Imsil)
- Cultivar : Samcheon-byeo, Hwaseong-byeo, Nampyeong-byeo
- Nitrogen application amount(kg/10a) : 11-4.5-5.7(N-P-K)
- Transplanting times(month. day) : Plain area - 5.20, 5.30, 6.9, 6.20
Intermediate area - 5.10, 5.20, 5.30, 6.9
- Planting distances(cm) : 30 × 14
- Examination years : 2002~2004

Results

The optimum transplanting times of Samcheon-byeo and Hwaseong-byeo was Jun 9, that of Nampyeong-byeo was May 30 in Kimje and that of Samcheon-byeo and Hwaseong-byeo was May 30, that of Nampyeong-bye o was May 20 to 30 in Imsil considering head rice yield.

The head rice ratio in Kimje was higher compared in Imsil and in Samcheon-byeo it was the best in Transplanting Jun 9 in Kimje, May 30 in Imsil and in Hwaseong-byeo it was the best in Transplanting June 9 in Kimje, May 20 to Jun 6, and In Nampyeong-byeo it was the best in Transplanting May 30 to June 10 in Kimje, May 30 in Imsil.

The protein contents of Samcheon-byeo was the best in transplanting Jun 19, those of Hwaseong-byeo and Nampyeong-byeo were less in transplanting June 9 to 19 in Kimje and not significantly different at the 5% level of the DMRT all the three cultivars in Imsil.

The palatability of Samcheon-byeo and Hwaseong-byeo were higher in Kimje compared to Imsil, that of Nampyeong-byeo was slightly higher in Imsil, in cultivars it was higher in Hwaseong-byeo and Nampyeong-byeo compared to Samcheon-byeo, and among the Transplanting times it was not significantly different.

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Table 1. Yearly rice yield according to the rice cultivars with different maturing type and transplanting date in Gimje. (kg/10a)

Cultivar	Samcheon-byeo				Hwaseong-byeo				Nampyeong-byeo			
	May 20	May 30	Jun. 9	Jun. 19	May 20	May 30	Jun. 9	Jun. 19	May 20	May 30	Jun. 9	Jun. 19
T												
R	491a	506a	505a	493a	506a	542a	543a	498a	537ab	554a	546a	505b
H	401b	441a	445a	428 $\overline{\text{H}}$	462c	505ab	512a	468bc	502 $\overline{\text{H}}$	531a	524a	477b

T : Transplanting date, R: Rice yield, H : Head rice yield

Within a column, means followed by the same letter are not significantly different at the 5% level by DMRT.

Table 2. Yearly rice yield according to the rice cultivars with different maturing type and transplanting date in Imsil. (kg/10a)

Cultivar	Samcheon-byeo				Hwaseong-byeo				Nampyeong-byeo			
	May 10	May 20	May 30	Jun. 9	May 10	May 20	May 30	Jun. 9	May 10	May 20	May 30	Jun. 9
T												
R	454a	492a	510a	495a	477a	504a	515a	495a	480ab	509a	503a	497a
H	325c	381b	431a	404ab	416b	448ab	471a	449ab	426ab	473a	474a	447a

Table 3. Protein content according to the rice cultivars with different maturing type and transplanting date in Gimje and Imsil. (%)

Cultivar	Samcheon-byeo				Hwaseong-byeo				Nampyeong-byeo			
	May 20	May 30	May 9	Jun.19	May 20	May 30	May 9	Jun.19	May 20	May 30	May 9	Jun.19
Gimje	6.1ab	6.5c	6.0bc	5.8a	6.1bc	6.4c	5.7a	5.9ab	6.1b	6.0b	5.7a	5.6a
Imsil	5.9a	5.9a	5.9a	6.0a	6.0ab	5.7a	5.7a	5.7a	5.8a	5.7a	5.7a	5.8a

Table 4. Palatability according to the rice cultivars with different maturing type and transplanting date in Gimje and Imsil. (%)

Cultivar	Samcheon-byeo				Hwaseong-byeo				Nampyeong-byeo			
	May 20	May 30	May 9	Jun.19	May 20	May 30	May 9	Jun.19	May 20	May 30	May 9	Jun.19
Gimje	60.6a	64.7a	66.5a	64.2a	75.4a	78.2a	77.3a	75.6a	74.2a	75.9a	77.1a	73.4a
Imsil	60.1a	62.4a	65.0a	64.0a	74.2a	77.4a	75.4a	72.6a	74.8a	77.0a	79.2a	74.9a