친환경 대체에너지 자원식물인 유채의 생태적 적응 연구

권병선, 최승선, 정동수[1], 신종섭[2]
순천대학교 식물생산과학부 자원식물개발학전공, [1]농촌진흥청 작물과학원 목포시험장
[2]순천시 농업기술센터

Studies of Ecological Adaptation of Industrial Rapeseed with Intimate Environment Substitute Energy Sources

Kwon B. S. and S. S. Choi, D. S. Jung[1] and J. S. Shin[2]
Sunchon Nat'l Univ. Sunchon 540-742, Korea
[1]Mokpo Experiment Station, Nati'l Crop Science Institute RDA, 534-830, Korea
[2]Sunchonsi Agricultural techniques Center, Sunchon 540-801, Korea

연구목적

친환경 에너지 식물인 유채의 생태적 적응력을 검정하고자 함.

재료 및 방법

가. 공시재료: 목포 - 유달외 16품종
충남 - 유달외 7품종
전북 - 유달외 15품종
경남 - 유달외 13품종
제주 - Asahi외 12품종

나. 처리내용

시험지	파종기(묘상)	이식기(본포)
목 포	-	9월 30일 직파
충 남	9월 20일	10월 25일 이식
전 북	9월 20일	10월 30일 이식
경 남	9월 20일	11월 1일 이식
제 주	10월 1일	11월 15일 이식

다. 파종법: 육묘이식 - 50×30cm 1주1본재식
직파 - 50×15cm 점파

결과 및 고찰

작과(목포), 충남(대전), 전북(익산)지역에서는 유달품종이 종실수량이 많았고 경남(진주)지역에서는 아부라마시리 품종이, 제주(제주)지역에는 제주재래가 종실수량이 많았다.

Table 1. Variation of bolting date of rapeseed from different planting region of Korea.

Variety	Mokpo	Deejun	Iksan	Jinju	Jeju
Yudal	Mar. 10	Mar. 22	Mar. 25	Mar. 21	Feb. 12
Miyuki	Mar. 2				
Titus	Mar. 28		Apr. 4	Mar. 30	
Giant-Rape	Mar. 27		Apr. 2	Mar. 31	Mar. 17
Skzeszowicki	Mar. 25		Apr. 3	Mar. 28	Mar. 8
Gorozanski	Mar. 23	Mar. 30	Apr. 3		Mar. 5
Rang	Mar. 17		Apr. 3	Mar. 24	Feb. 28
Malchower	Mar. 23	Mar. 31	Apr. 2	Mar. 27	Mar. 2
Gylle	Mar. 5		Mar. 17	Mar. 9	
Rigo	Mar. 11				
Gokstard	Mar. 14		Apr. 2	Apr. 5	
Gry	Mar. 10		Mar. 16	Mar. 31	
Isuznadane	Feb. 6	Mar. 18	Mar. 18	Mar. 2	Feb. 4
Aburamasari	Feb. 6	Mar. 19	Mar. 19	Mar. 6	Feb. 9
Gyllenrapes	Feb. 25	Mar. 18	Mar. 19	Mar. 14	Feb. 28
Rigo-rapus	Mar. 5	Mar. 17	Mar. 19	Mar. 6	Feb. 14
Dairunadane	Feb. 1	Mar. 19	Mar. 10	Mar. 1	Dec.17
Marcus			Apr. 3		
Asahi					Feb. 7
Jeju local					Feb. 6

Table 2. Variation of flowering date of rapeseed from different planting region of Korea.

Variety	Mokpo	Deejun	Iksan	Jinju	Jeju
Yudal	Apr. 9	Apr. 18	Apr. 17	Apr. 6	Apr. 6
Miyuki	Mar. 31				
Titus	Apr. 13		Apr. 21	Apr. 20	
Giant-Rape	Apr. 11		Apr. 23	Apr. 27	Apr. 23
Skzeszowicki	Apr. 12		Apr. 18	Apr. 14	Apr. 16
Gorozanski	Apr. 11	Apr. 22	Apr. 13		Apr. 12
Rang	Apr. 9		Apr. 20	Apr. 13	Apr. 17
Malchower	Apr. 11	Apr. 21	Apr. 17	Apr. 13	Apr. 17
Gylle	Apr. 8		Apr. 10	Apr. 12	
Rigo	Apr. 6				
Gokstard	Apr. 19		Apr. 28	Apr. 23	
Gry	Apr. 17		Apr. 23	Apr. 17	
Isuznadane	Apr. 1	Apr. 14	Apr. 9	Mar. 28	Mar. 26
Aburamasari	Apr. 5	Apr. 17	Apr. 9	Mar. 30	Apr. 4
Gyllenrapes	Apr. 7	Apr. 13	Apr. 9	Mar. 31	Apr. 7
Rigo-rapus	Apr. 5	Apr. 12	Apr. 6	Mar. 29	Apr. 5
Dairunadane	Apr. 2	Apr. 16	Apr. 6	Mar. 27	Mar. 23
Marcus			Apr. 20		
Asahi					Apr. 7
Jeju local					Apr. 6

Table 3. Variation of maturing date of rapeseed from different planting region of Korea.

Variety	Mokpo	Deejun	Iksan	Jinju	Jeju
Yudal	May. 29	June. 23	June. 10	June. 4	June. 5
Miyuki	May. 20				
Titus	June. 10		June. 14	June. 15	
Giant-Rape	June. 19		June. 14	June. 18	June. 12
Skzeszowicki	June. 12		June. 14	June. 15	June. 10
Gorozanski	June. 15	June. 25	June. 8		June. 8
Rang	June. 19		June. 14	June. 13	June. 10
Malchower	June. 11	June. 25	June. 13	June. 13	June. 5
Gylle	June. 4		June. 8	June. 10	
Rigo	May. 30				
Gokstard	June. 8		June. 15	June. 17	
Gry	June. 3		June. 14	June. 16	
Isuznadane	May. 27	June. 17	June. 2	May. 29	May. 28
Aburamasari	May. 26	June. 17	June. 7	June. 2	June. 2
Gyllenrapes	May. 30	June. 22	June. 8	June. 3	June. 2
Rigo-rapus	May. 31	June. 24	June. 6	June. 2	June. 3
Dairunadane	May. 24	June. 16	June. 7	June. 1	May. 27
Marcus			June. 15		
Asahi					June. 3
Jeju local					May. 27

Table 4. Variation of plant height of rapeseed from different planting region of Korea.

Variety	Mokpo	Deejun	Iksan	Jinju	Jeju
Yudal	137	122	109	128	112
Miyuki	117				
Titus	166		131	170	
Giant-Rape	187		145	192	147
Skzeszowicki	159		131	192	122
Gorozanski	167	156	101		125
Rang	170		132	159	127
Malchower	164	163	139	161	122
Gylle	139		103	130	
Rigo	138				
Gokstard	145		134	160	
Gry	144		129	155	
Isuznadane	127	74	76	103	94
Aburamasari	142	102	94	115	116
Gyllenrapes	139	121	97	123	111
Rigo-rapus	144	135	96	127	105
Dairunadane	145	97	85	109	104
Marcus			144		
Asahi					111
Jeju local					96

Table 5. Variation of ear length of rapeseed from different planting region of Korea.

Variety	Mokpo	Deejun	Iksan	Jinju	Jeju
Yudal	40		33	45	34
Miyuki	40				
Titus	52		42	54	40
Giant-Rape	43		40	50	40
Skzeszowicki	50		42	54	36
Gorozanski	47		35		32
Rang	46		36	51	38
Malchower	51		45	53	
Gylle	48		36	48	
Rigo	39				
Gokstard	32		35	56	
Gry	43		41	58	
Isuznadane	44		30	48	37
Aburamasari	41		30	40	40
Gyllenrapes	44		31	45	39
Rigo-rapus	43		33	48	40
Dairunadane	43		24	40	37
Marcus			44		
Asahi					37
Jeju local					32

Table 6. Variation of branches number of rapeseed from different planting region of Korea.

Variety	Mokpo	Deejun	Iksan	Jinju	Jeju
Yudal	35	51	29	52	34
Miyuki	29				
Titus	12		25	32	
Giant-Rape	13		27	38	27
Skzeszowicki	20		24	36	26
Gorozanski	19	45	35		23
Rang	22		28	43	30
Malchower	20	45	25	33	25
Gylle	28		28	44	
Rigo	25				
Gokstard	14		22	29	
Gry	18		27	48	
Isuznadane	30	78	38	54	23
Aburamasari	21	76	27	45	25
Gyllenrapes	30	63	32	48	26
Rigo-rapus	30	82	33	54	26
Dairunadane	27	81	35	56	23
Marcus			34		
Asahi					36
Jeju local					26

Table 7. Variation of pods number per ear of rapeseed from different planting region of Korea.

Variety	Mokpo	Deejun	Iksan	Jinju	Jeju
Yudal	41	60	35	47	24
Miyuki	33				
Titus	38		38	48	
Giant-Rape	38		35	57	15
Skzeszowicki	41		37	55	17
Gorozanski	39	76	37		16
Rang	38		34	52	18
Malchower	41	72	36	42	18
Gylle	45		38	49	
Rigo	37				
Gokstard	33		37	58	
Gry	32		40	44	
Isuznadane	34	39	26	34	18
Aburamasari	47	41	35	43	20
Gyllenrapes	42	67	36	54	19
Rigo-rapus	43	61	37	60	17
Dairunadane	40	91	32	34	20
Marcus			40		
Asahi					29
Jeju local					18

Table 8. Variation of seed yield of rapeseed from different planting region of Korea.

Variety	Mokpo	Deejun	Iksan	Jinju	Jeju
Yudal	307.3	464.9	192.7	328.3	150.6
Miyuki	235.6				
Titus	212.0		137.2	281.7	
Giant-Rape	171.3		146.1	211.8	60.5
Skzeszowicki	245.0		168.0	225.2	106.8
Gorozanski	215.4	431.4	196.1		98.1
Rang	231.3		193.1	277.6	
Malchower	241.7	413.7	155.3	257.7	
Gylle	228.0		185.8	264.0	
Rigo	151.0				
Gokstard	160.1		100.0	157.4	
Gry	158.0		136.1	212.3	
Isuznadane	238.0	276.1	158.9	298.2	76.2
Aburamasari	217.3	452.1	191.1	395.7	132.8
Gyllenrapes	204.2	370.2	155.3	266.5	98.8
Dairunadane	186.8	421.9	153.3	296.6	116.5
Marcus	284.0	430.8	184.5	374.0	122.2
Asahi			188.6		173.4
Jeju local					90.9
C.V.%	11.70	8.5	5.87	10.8	7.2
L.S.D 5%	42.27	60.77	15.87	49.84	13.29
1%	56.98	84.34	21.37	67.36	18.06

Table 9. Variation of index of seed yield of rapeseed from different planting region of Korea.

Variety	Mokpo	Deejun	Iksan	Jinju	Jeju
Yudal	100	100	100	100	87
Miyuki	77				
Titus	69		71	86	
Giant-Rape	56		76	65	35
Skzeszowicki	80		87	69	62
Gorozanski	70	93	102		57
Rang	75		100	85	52
Malchower	79	89	81	79	59
Gylle	74		86	80	
Rigo	49				
Gokstard	52		52	48	
Gry	51		63	65	
Isuznadane	78	59	83	91	44
Aburamasari	71	97	99	121	77
Gyllenrapes	67	80	81	81	60
Rigo-rapus	61	91	80	90	67
Dairunadane	92	93	96	114	71
Marcus			98		
Asahi					
Jeju local					

Table 10. Variation of 1,000 seed weight of rapeseed from different planting region of Korea.

Variety	Mokpo	Deejun	Iksan	Jinju	Jeju
Yudal	2.8	3.6	3.1		3.9
Miyuki	3.2				
Titus	3.1		3.5		
Giant-Rape	3.0		3.4		3.4
Skzeszowicki	3.1		3.7		4.2
Gorozanski	4.0	4.9	3.0		4.9
Rang	3.3		3.6		4.1
Malchower	4.0	4.8	4.1		5.1
Gylle	3.3		3.4		
Rigo	2.7				
Gokstard	2.2		2.5		
Gry	2.7		3.1		
Isuznadane	3.4	3.9	4.0		4.3
Aburamasari	2.8	3.9	3.6		4.2
Gyllenrapes	2.9	3.8	3.6		3.7
Rigo-rapus	2.5	3.7	3.4		3.6
Dairunadane	3.7	5.1	4.5		5.0
Marcus			3.8		
Asahi					4.2
Jeju local					4.2