

SEASONAL DEVELOPMENT
AND PRODUCTION OF *LEDUM DECUMBENS* (ERICACEAE)
IN THE UPPER KOLYMA BASIN (MAGADAN REGION)

N. V. Sinelnikova, . N. Pakhomov

SUMMARY

Seasonal development of *Ledum decumbens* (Ait.) Lodd. ex Steud. in 1997—2002 was studied in the upper-flow of the Kolyma-River. (62°05' NL, 148°40' EL) It is established that sum of maximal air temperatures, number of frosts, sum of active temperatures influence on duration of generative cycle.

Duration of a period from mass appearance of phenophases of *L. decumbens* is 4—7 days and depends from character of rainfall distribution, a number of sunny and cloudy days.

Optimal period of collection of *L. decumbens* shoots is a beginning of the second-third decade of July. Prognosis of yield of shoots is possible before 45—55 days of beginning of mass collection according to sum of average day temperatures over 10° in May.

. . . 4, 2004

***TRIFOLIUM REPENS* (FABACEAE)**

© . . . , . . .

Trifolium repens L. — « » -
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(, ..., 1951). -
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1994; , 1995). (, , -
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(, 1995; Turkington, Harper 1979; Turkington et al., 1994). -
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1996 1997 . -
 (, 774- .).
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15 1 2, -
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 8—15 % ().

Dactylis glomerata L., *Festuca pratensis* L., *Lupinus polyphyl-*
lus Lindl. *Trifolium medium* L. -
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Trifolium repens
1996

		1 / 2 (n = 4)		5 / 2 (n = 20)		9 / 2 (n = 36)	
		±	, %	±	, %	±	, %
1-	12.06	0.3 ± 0.3	200	0.3 ± 0.2	171	0.1 ± 0.06	252
	10.07	1.8 ± 0.6	55	1.1 ± 0.1	57	1.1 ± 0.2	95
	28.07	2.3 ± 0.7	56	2.2 ± 0.4	69	2.5 ± 0.4	74
	14.08	4.5 ± 1.4	53	3.1 ± 0.5	63	3.2 ± 0.3	54
	28.08	7 ± 1.4	28	3.8 ± 0.8	82	3.4 ± 0.4	64
	11.09	7.6 ± 1.6	30	4.2 ± 0.6	95	4.5 ± 0.6	62
	11.10	6.7 ± 0.4	80	5.0 ± 0.9	73	4.5 ± 0.6	67
	12.06	0.8 ± 0.3	66	0.3 ± 0.2	171	0.1 ± 0.06	252
	10.07	1.5 ± 0.6	66	0.6 ± 0.2	138	0.7 ± 0.2	140
	28.07	1.8 ± 0.3	28	0.8 ± 0.3	144	0.8 ± 0.3	163
	14.08	0.5 ± 0.6	200	1.5 ± 0.9	246	1.1 ± 0.4	199
	28.08	1.7 ± 0.4	35	2.8 ± 1.4	209	1.8 ± 0.2	206
	11.09	4.7 ± 0.4	12	3.3 ± 1.4	170	2.8 ± 1.1	208
	11.10	4.3 ± 1.0	35	1.8 ± 0.9	200	2.0 ± 0.8	208
	12.06	0.8 ± 0.3	66	0.7 ± 0.2	171	0.1 ± 0.06	252
	10.07	0.7 ± 0.3	66	0.2 ± 0.1	177	0.4 ± 0.1	170
	28.07	0.2 ± 0.3	200	0.6 ± 1.3	193	0.4 ± 0.2	200
	14.08	0.5 ± 0.6	119	0.8 ± 0.5	265	1.0 ± 0.3	194
	28.08	1.0 ± 0.7	100	1.8 ± 0.9	205	1.3 ± 0.5	209
	11.09	3.0 ± 1.2	57	0.7 ± 0.3	174	0.8 ± 0.3	218
	12.06	1.0 ± 0.9	200	1.0 ± 0.6	205	5.0 ± 0.7	28
	10.07	11 ± 4.8	75	7.0 ± 1.5	91	12 ± 2.3	87
	28.07	26 ± 9.2	59	20 ± 4.8	100	31 ± 6.6	107
	14.08	60 ± 20	57	59 ± 13	94	63 ± 13	106
	28.08	121 ± 21	24	98 ± 22	92	84 ± 5	87
	11.09	164 ± 51	44	142 ± 31	89	119 ± 21	89
	12.06	4.8 ± 0.8	31	3.1 ± 0.5	55	5.5 ± 1.4	80
	10.07	12 ± 4.5	68	10 ± 1.54	66	11 ± 1.6	86
	28.07	29 ± 10	61	25 ± 3.9	65	30 ± 4.3	72
	14.08	64 ± 14	37	53 ± 10	81	58 ± 11	93
	28.08	114 ± 27	33	78 ± 18	91	93 ± 18	98
	11.09	160 ± 55	48	107 ± 22	84	143 ± 24.7	86
2	14.08	182 ± 68	64	192 ± 39	84	153 ± 23	77
	28.08	311 ± 118	53	220 ± 35	64	212 ± 32	75
	11.09	346 ± 222	91	237 ± 45	78	356 ± 37	78
	11.10	400 ± 120	42	256 ± 51	78	274 ± 45	83

		1 / 2 (= 4)		5 / 2 (= 20)		9 / 2 (= 36)	
		±	v, %	±	v, %	±	v, %
	10.07	0.7 ± 0.3	66	0.3 ± 0.2	219	0.3 ± 0.1	172
	28.07	1.5 ± 0.6	66	0.3 ± 0.2	270	0.4 ± 0.14	200
	14.08	0.6 ± 0.8	173	0.8 ± 0.5	273	0.8 ± 0.5	316
	28.08	1.0 ± 1.1	173	2.5 ± 1.2	194	0.8 ± 0.28	215
	11.09	1.6 ± 0.8	92	2.5 ± 1.2	194	2.3 ± 0.9	198
	11.10	2.6 ± 0.9	43	1.6 ± 0.9	217	1.4 ± 0.6	210

(. 1).

(r = +0.03—0.34),

(r = +0.69—

0.87),

(1 / 2)

4 %

(5 9 / 2).

(. 2).

(13 24 %),

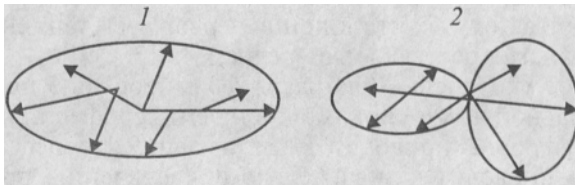
274 ± 45 2

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(1997 .)

1235.1,

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Trifolium repens

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, 2 —

Trifolium repens
(11.09.96)

	1 5 / 2	1 9 / 2	5 9 / 2
	1.99	1.83	0.35
	0.37	0.81	0.61
	0.89	0.28	1.08
	0.48	0.04	2.04
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	0.93	2.48	0.37
	1.86	1.78	0.23
	0.55	0.49	0.13
t- 90%-	1.78	1.73	1.68

2842.9 (28 %)) 5449.9² (54 %) ; -
 — 5240.7 9377.0² . -
 (1 9 / 2) : 34,
 95 114 / 2. —

($r = +0.81$, = 20).

(Turkington, Harper,

1979; Turkington et al., 1994).

repens L.

Trifolium

1. . *repens*
 1—9 / 2 ,

4, 13, 24 %.

2.

4. (12, 28 54 %).

($r = +0.81$).

(02-6.0-143).

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- // . . . 1994. . 55, 6. . 708—715. . ., 1951. // . . ., 1995. . 107—113. // . . ., 1981. . 161-178.
- Turkington R., Harper J. L. The growth, distribution and neighbor relationships of *Trifolium repens* in a permanent pasture. 1. Ordination, pattern and connect // Ecol. 1979. Vol. 67, N 8. P. 201-254.
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EXPERIMENTAL INVESTIGATIONS OF PROCESS OF *TRIFOLIUM REPENS* (FABACEAE) CLON FORMING

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SUMMARY

Trifolium repens L. are a cosmopolitan plant of a practical significance. Plants have creeping shoots. Results of observations (1996—1997) from the experimental planting of the density 1, 5 and 9 ramet/m², and once from the natural *T. repens* coenopopulation. At the early stage of the ramet's development (until roots yang shoots in the ground) the radian growing of creeping shoot and elliptic forms at clans were observed. Generative ramet's reproduction indicators were not the reliable correlating with vegetative ramet's grows once. Rooting of shoots results in intensive increasing of vegetative and generative organs and close correlation between them.