

Appendix. Emergence after treatment with 10 % (vol/vol) aqueous smoke of 61 plant species native to ponderosa pine forests.

Species ^a	Control	Smoke	Seed wt.
Smoke stimulated	— Emergence (%) ^b —		— mg ^c —
<i>Artemisia ludoviciana</i>	20±19	55±11	0.14
<i>Erigeron speciosus</i>	8±6	27±6	0.05
<i>Penstemon barbatus</i>	8±9	61±13	0.76
<i>Penstemon pachyphyllus</i>	3±4	30±8	1.76
<i>Penstemon palmeri</i>	41±6	81±10	0.86
<i>Penstemon rostriflorus</i>	3±6	23±3	0.42
<i>Penstemon virgatus</i>	19±9	61±6	0.86
<i>Symphyotrichum falcatum</i>	13±9	30±18	0.18
No significant smoke effect			
<i>Antennaria rosulata</i>	42±29	69±5	0.04
<i>Arabis fendleri</i>	95±3	81±22	0.12
<i>Arnica chamissonis</i>	14±6	3±4	0.56
<i>Asclepias tuberosa</i>	55±29	38±7	5.30
<i>Bahia dissecta</i>	5±6	42±34	0.04
<i>Castilleja integra</i>	48±28	52±23	0.20
<i>Chamerion angustifolium</i>	14±9	11±8	0.04
<i>Commelina dianthifolia</i>	86±14	83±11	3.00
<i>Elymus elymoides</i>	88±11	90±7	5.60
<i>Erigeron formosissimus</i>	64±21	50±10	0.16
<i>Eriogonum jamesii</i>	50±14	42±11	2.68
<i>Eriogonum racemosum</i>	31±9	34±8	2.64
<i>Erysimum capitatum</i>	72±4	81±7	0.46
<i>Festuca arizonica</i>	79±14	67±7	1.24
<i>Geranium caespitosum</i>	31±13	31±11	6.90
<i>Helianthella quinquenervis</i>	56±14	71±15	7.38
<i>Heliomeris multiflora</i>	30±13	38±11	0.56
<i>Heterotheca villosa</i>	48±9	42±8	0.28
<i>Hymenoxys bigelovii</i>	39±3	45±11	1.96
<i>Hymenoxys richardsonii</i>	41±15	53±8	0.64
<i>Ipomopsis aggregata</i>	38±15	59±15	1.20
<i>Linum lewisii</i>	92±6	88±5	1.42
<i>Lupinus argenteus</i>	23±7	35±10	23.24
<i>Machaeranthera canescens</i>	50±13	45±14	0.42
<i>Machaeranthera tanacetifolia</i>	56±14	72±11	1.28
<i>Muhlenbergia wrightii</i>	52±8	63±14	0.03
<i>Oenothera elata</i> ssp. <i>hookeri</i>	14±16	30±8	0.68
<i>Penstemon clutei</i>	53±12	64±14	1.08

Species ^a	Control	Smoke	Seed wt.
<i>Penstemon rydbergii</i>	20±20	20±11	0.12
<i>Penstemon whippleanus</i>	20±6	22±11	0.24
<i>Pinus ponderosa</i>	20±14	20±3	35.94
<i>Pseudocymopterus montanus</i>	63±22	58±12	2.08
<i>Senecio spartioides</i>	53±21	41±19	0.12
<i>Thalictrum fendleri</i>	42±11	64±11	3.20
<i>Thlaspi montanum</i>	56±22	84±6	0.52
<i>Townsendia exscapa</i>	13±10	28±11	1.76
<i>Vicia americana</i>	71±12	64±14	13.72
Emergence >1% <10%			
<i>Achnatherum hymenoides</i>	5±6	0±0	3.50
<i>Agoseris glauca</i>	6±5	9±6	2.16
<i>Allium cernuum</i>	2±3	2±3	3.44
<i>Allium geyeri</i>	3±5	8±10	4.50
<i>Anaphalis margaritacea</i>	3±4	2±3	0.06
<i>Calylophus hartwegii</i>	2±3	3±4	0.54
<i>Monardella odoratissima</i>	3±4	6±5	0.84
<i>Oxytropis lambertii</i>	2±3	2±3	3.74
<i>Potentilla crinita</i>	5±6	6±5	0.50
<i>Potentilla subviscosa</i>	2±3	2±3	0.24
No emergence			
<i>Clematis hirsutissima</i>	0±0	0±0	6.72
<i>Iris missouriensis</i>	0±0	0±0	18.48
<i>Nicotiana attenuata</i>	0±0	0±0	0.12
<i>Sisyrinchium demissum</i>	0±0	0±0	0.78

^a Species classified as smoke stimulated if emergence was significantly greater in the smoke than the control treatment at $P < 0.05$ (two-tailed t tests).

^b Mean ± 1 SD.

^c Mean weight of individual seeds; $n = 50$ for seeds averaging ≥ 0.5 mg and $n = 100$ for seeds averaging < 0.5 mg.