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Supplementary material

Benefits of adopting seed-based technologies for rehabilitation in the mining sector: a Pilbara perspective

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Seed dormancy classification methods used in this study

Seed dormancy status can be determined by assessing various attributes of mature, freshly collected seeds. These include the seed or fruit coat permeability to water, embryo size and developmental stage (e.g. confirmation of embryo growth prior to germination), and the initial germination capability over a range of suitable environmental conditions (Baskin and Baskin 2004c). Seeds can then be routinely assigned into one of six dormancy classes: non-dormant (ND), physical (PY), physiological (PD), morphological (MD), morphophysiological (MPD), and combinational (PY + PD), and if required, further sub-classified into different levels and types (Baskin and Baskin 2004b; Baskin and Baskin 2004c; Erickson 2015). Species classified in this study followed the methods outlined below.

Seed collection

Seeds of 105 species from 54 genera and 26 families (Table 3) were collected from the Pilbara (bioregion). To ensure a wide representation of key species were present in this study, collections targeted areas of the Pilbara that received adequate seasonal rainfall to initiate consistent flowering and seed production. Specific landscape positions and a range of dominant community assemblages (i.e. mesa outcrops, alluvial flats, drainage gullies, creek lines), plant forms (i.e. trees, shrubs, herbs, and grasses), and life cycles (i.e. annuals and perennials) were sampled to achieve the targeted high-diversity seed collections. Out of the ten most dominant families and genera recognised in the Pilbara bioregion, nine of these families and eight of these genera were represented in this study (Erickson and Merritt 2016). At a species level, this study assesses approximately 6% of the Pilbara flora (DPaW 2007 -; Erickson and Merritt 2016).

Seeds were obtained from a minimum of 30 (to 1000+) plants over the whole population, except for collections of *Mirbelia viminalis*, *Senna venusta*, and *Eucalyptus leucophloia*, where limited plant numbers, or insufficient mature seeds, were available at the time of collection. All species were cleaned to pure seeds, except the three *Aristida* species (*A. contorta*, *A. inaequiglumis* and *A. latifolia*), which remained in the florets, and *Astrotricha hamptonii*, *Boerhavia coccinea*, and *Tribulus suberosus*, which remained in indehiscent fruits. For ease of reference, all collected material was referred to as seeds. For validation of the taxonomic status of each species, herbarium specimens for all seed collections were lodged at the Western Australian Herbarium with nomenclature following FloraBase listings (Western Australian Herbarium 1998 -). Prior to experimental set-up, seed material was stored in 15°C/15% RH (controlled environment [CE] room), or at -18°C, after a minimum of four weeks drying in the CE room.

Seed viability

Viability was assessed using a Faxitron MX-20 Digital X-ray Cabinet (Tucson, Arizona, USA). For each species, 3-5 replicates of 50 seeds were x-rayed to assess whether seeds contained fully-developed embryos/endosperm (i.e. filled) or whether these tissues were absent (i.e. non-filled). 'Filled' embryos/endosperm that were deemed viable appear uniformly white/grey in the x-ray images. Seeds that had questionable clarity in the image were dissected under a microscope to determine the condition of the embryo/endosperm. On occasions, seed collections required further cleaning to ensure the highest viability possible was utilised in the germination experiments (noted in the 'Viability % (X-ray Fill)' column, Table 3).

Seed characteristics

For all species, seed weight was determined from five replicates of 50 seeds, or from one replicate of 250 seeds for very small seeds, and extrapolated to obtain a 1000-seed weight (in grams). For species from plant genera or families in which the presence of physical dormancy has been established, and for seeds for which < 75% germination was recorded (see *Germination experiments* section), seed coat permeability to water was assessed via an imbibition test. All species in this study that belonged to families known to possess PY (Gama-Arachchige *et al.* 2013) were treated with near boiling water (95°C for 1-5 mins) to alleviate PY. Occasionally, multiple techniques to alleviate PY were assessed, such as immersion in concentrated sulphuric acid (98% H_2SO_4 for 1-8 h), or physically nicking the fruit or seed coat with a scalpel blade. For all species, confirmation of water uptake was assessed by testing the fruits and/or seeds of each species (see imbibition examples in Erickson 2015; Erickson *et al.* 2016b).

Embryo classification followed Martin (1946) and Baskin and Baskin (2007) whereby the embryo shape, location within the seed, and embryo to seed length ratio (E:S ratio) were determined. A minimum of five fully imbibed seeds were longitudinally dissected under a stereo microscope with the embryo morphology and position within the seed visually

assessed and matched to the modified-Martin key embryo types identified in Baskin and Baskin (2007). To calculate the E:S ratio, the maximum lengths of the seed coat (from the internal seed wall) and embryo were measured. For embryos that exceeded the internal seed length measurement (e.g. peripheral embryos that circumnavigate the inner seed coat wall), multiple straight line measurements were taken to capture the overall length of the embryo, and therefore an E:S ratio of > 1 was possible (Table 3; Erickson *et al.* 2016b).

Germination experiments

The initial germination of seeds was tested on water agar (control), and the effects of germination stimulants, gibberellic acid (GA_3) and karrikinolide (KAR_1), were determined with seeds incubated over a range of temperatures (10–35°C) that approximate environmental conditions of the Pilbara arid zone. As far as practical, initial germination was carried out within 4-6 weeks of seed collection. Germination responses to temperature and the stimulants aided in understanding what the drivers of dormancy break (i.e. GA_3) and/or germination stimulation (i.e. KAR_1) were for each species (see 'Germination signature' assignment and classification tree analysis section of Erickson 2015 for a full synthesis). For species identified to have an impermeable seed/fruit coat layer (i.e. PY and PY + PD classes), PY was broken prior to germination testing predominantly using wet heat treatments.

Four replicates of 20-25 seeds were plated in 90 mm plastic Petri dishes containing: (1) water agar (0.7% w/v), (2) water agar + 289 µM GA_3 (Sigma-Aldrich Co., Australia), (3) or water agar + 0.67 µM KAR_1 (3-methyl-2H-furo[2,3-c]pyran-2-one, synthesized following Flematti *et al.* 2005). The concentrations of GA_3 and KAR_1 used in this study are consistent with recently applied concentrations used in other arid zone seed biology studies in Western Australia (Commander *et al.* 2009; Erickson *et al.* 2016c). Plates were wrapped with plastic film to prevent moisture loss. Prior to plating, seeds were surface sterilised in 2% (w/v) calcium hypochlorite ($Ca[OCl]_2$) under vacuum for 30 mins (10 min on-off-on, at -70 kPA), and rinsed multiple times in sterilised de-ionised water. Seeds were incubated at constant 10, 15, 20, 25, 30, and 35°C on an alternating 12 h day/night cycle. Light was delivered via cool white fluorescent tubes (30W) with a photon flux density of 30 µ mol m^{-2}

s^{-1}, 400-700 nm. Germination was scored weekly for 28 d and defined as radicle emergence greater than one-third of the seed coat length (Appendix A).

Seed dormancy classification

The widely accepted dormancy classification scheme (Baskin and Baskin 2004c) was used to assign species to different dormancy classes, specifically following the simplified dichotomous key outlined in Baskin and Baskin (2004b). To assist in assigning dormancy classes, the dormancy classification scheme was modified to include a threshold level of germination of 75% for seeds incubated in water across a range of temperatures, with seeds exceeding this germination percentage deemed ND (Erickson 2015). The separation between 'dormant' and ND species is often reported for germination levels of approximately 70-80% (Thompson *et al.* 2003; Baskin and Baskin 2004b; Jurado and Flores 2005; Flores *et al.* 2006) but does not currently exist in any of the published dichotomous keys (Baskin and Baskin 2003; Baskin and Baskin 2004b; Baskin and Baskin 2004a).

To confirm species with MD/MPD and separate from a ND/PD species, evidence of embryo growth prior to radicle emergence must be demonstrated (Baskin and Baskin 2005). Therefore, species that exhibited an E:S ratio < 0.5 (i.e. an underdeveloped embryo; Baskin and Baskin 2007), but germinated to ≥ 75% under any germination treatment after 28 days, were re-tested to assess for embryo growth. The same E:S ratio measurements were taken at 1 day after hydration and just prior to germination occurring (e.g. seed coat split and radicle emergence at 3-9 d) (Table S1). Any internal growth of the embryo at the cotyledon end prior to radicle emergence was used as confirmation of 'embryo growth', which separated MD/MPD species from the ND class. Germination above the 75% level with GA_3 or KAR_1, but not under control conditions, separated MPD from the MD class. Specifically, three rules were adhered to: (1) ND ≥ 75% > PD, (2) MD ≥ 75% > MPD, and (3) PY ≥ 75% > PY + PD (with the PY component treated to alleviate seed coat impermeability), after germination testing for 28 d.

Table S1. Initial embryo to seed length (E:S) ratio, final E:S ratio at the time the seeds coats split prior to radicle emergence, and total percentage increase in the E:S ratio for *Hibbertia glaberrima*, *Stylidium desertorum* and *Wahlenbergia tumidifructa* (adapted from Erickson *et al.* 2016b). Numbers in parentheses depict the initial and final embryo lengths (µm) of the embryos. Seeds of all species were incubated in constant 25°C on water agar, except *S. desertorum* which was incubated on water agar + KAR_1. Underdeveloped embryos and the subsequent placement in the MPD class, for *Astrotricha hamptonii* and *Trachymene oleracea* have been inferred due to the very low E:S ratio and low germination (see Table 3 and Appendix A).

	E:S ratio *(embryo length in µm)*		
Species	**Initial***	**Prior to radicle emergence****	**% increase in E:S ratio**
Dilleniaceae			
Hibbertia glaberrima	0.112 ± 0.03 *(205 ± 42.1))*	> 1.1*** *(> 2887)*	> 882.1***
Stylidiaceae			
Stylidium desertorum	0.256 ± 0.02 *(78 ± 5.5)*	0.803 ± 0.05 *(286 ± 33.1)*	213.7
Campanulaceae			
Wahlenbergia tumidifructa	0.539 ± 0.01 *(256 ± 6.7)*	0.687 ± 0.02 *(328 ± 9.8)*	27.5

* 1d after hydration; **3-9d after hydration; *** Experiments with *H. glaberrima* did not capture the full extent of embryo growth prior to radicle emergence and at times took up to 43d for embryo growth to be detected, however embryo growth in this species is consistent with growth observed in other species of *Hibbertia* occurring in Western Australia (Hidayati *et al.* 2012).

Appendix A. Raw mean germination data (± s.e.) for all 105 species after germination testing on water agar ± GA_3 or KAR_1 tested across constant 10°C, 15°C, 20°C, 25°C, 30°C, and 35°C. Species are sorted in family order.

Family (-aceae)	Species	Control						GA_3						KAR_1					
		10°C	15°C	20°C	25°C	30°C	35°C	10°C	15°C	20°C	25°C	30°C	35°C	10°C	15°C	20°C	25°C	30°C	35°C
Amaranth-	*Gomphrena cunninghamii*	4 (1.6)	32 (6.7)	45 (4.7)	34 (7.0)	28 (1.6)	17 (5.7)	3 (1.0)	38 (8.3)	84 (1.6)	92 (2.8)	88 (1.6)	91 (3.4)	62 (7.4)	97 (1.9)	96 (2.3)	87 (1.9)	90 (3.5)	89 (1.9)
Amaranth-	*Ptilotus auriculifolius*	54 (7.4)	75 (6.0)	77 (5.7)	81 (1.9)	82 (1.2)	84 (2.8)	76 (7.1)	81 (4.1)	89 (3.0)	97 (1.9)	100 (0.0)	98 (1.2)	60 (4.9)	81 (4.7)	88 (2.3)	95 (5.0)	95 (1.9)	84 (5.7)
Amaranth-	*Ptilotus macrocephalus*	58 (3.5)	72 (3.3)	86 (3.5)	98 (1.2)	96 (2.8)	96 (4.0)	98 (1.2)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)	79 (6.6)	88 (3.7)	99 (1.0)	100 (0.0)	100 (0.0)	93 (1.0)
Amaranth-	*Ptilotus nobilis*	98 (1.2)	96 (1.6)	93 (2.5)	94 (2.6)	97 (1.9)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)	98 (1.2)	97 (1.0)	98 (1.2)	97 (1.9)	97 (1.9)	98 (1.2)
Arali-	*Astrotricha hamptonii*	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (3.0)	0 (0.0)	0 (0.0)
Arali-	*Trachymene oleracea*	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.2)	3 (1.9)	5 (1.9)	1 (1.0)	0 (0.0)	3 (1.9)	5 (2.5)	4 (2.3)	1 (1.0)	5 (3.0)
Aster-	*Chrysocephalum apiculatum*	60 (5.9)	48 (3.3)	82 (4.8)	76 (5.4)	74 (2.6)	37 (1.9)	89 (5.0)	97 (1.0)	100 (0.0)	99 (1.0)	98 (1.2)	77 (1.0)	78 (6.8)	69 (6.2)	75 (5.3)	80 (2.8)	74 (6.6)	46 (5.0)
Aster-	*Pterocaulon sphacelatum*	12 (4.3)	9 (2.5)	5 (1.0)	23 (4.7)	65 (6.4)	9 (3.4)	78 (4.8)	93 (3.0)	61 (3.4)	60 (2.8)	84 (2.8)	88 (5.9)	52 (6.9)	46 (3.5)	46 (5.3)	57 (3.4)	82 (3.8)	78 (5.0)
Aster-	*Rhodanthe margarethae*	1 (1.0)	29 (7.7)	89 (3.0)	99 (1.0)	21 (4.1)	0 (0.0)	2 (1.2)	39 (4.4)	92 (2.3)	97 (1.9)	35 (6.6)	0 (0.0)	1 (1.0)	49 (1.0)	81 (8.2)	89 (2.5)	19 (3.4)	0 (0.0)
Aster-	*Streptoglossa decurrens*	4 (4.0)	4 (1.6)	30 (11.6)	98 (2.0)	68 (13.2)	92 (4.6)	61 (13.0)	100 (0.0)	42 (6.8)	100 (0.0)	100 (0.0)	55 (8.2)	66 (9.6)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)

Boragin-	*Trichodesma zeylanicum*	4 (2.8)	16 (2.8)	8 (3.3)	1 (1.0)	0 (0.0)	1 (1.0)	7 (3.4)	19 (4.1)	21 (4.4)	1 (1.0)	0 (0.0)	0 (0.0)	1 (1.0)	1 (1.0)	2 (1.2)	0 (0.0)	1 (1.0)	1 (1.0)
Brassic-	*Lepidium catapycnon*	n/t	18^	n/t	0^	n/t	n/t	n/t	89^	n/t	89^	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Brassic-	*Lepidium echinatum*	94 (2.6)	97 (1.9)	97 (1.9)	95 (1.9)	97 (1.9)	75 (4.1)	85 (3.0)	95 (1.9)	97 (1.9)	98 (1.2)	98 (1.2)	97 (1.9)	97 (1.9)	97 (1.0)	100 (0.0)	95 (3.0)	88 (4.3)	83 (4.7)
Brassic-	*Lepidium pedicellosum*	44 (5.2)	16 (1.6)	19 (5.3)	50 (4.8)	6 (3.8)	0 (0.0)	45 (10.8)	73 (5.7)	75 (5.5)	71 (1.9)	54 (2.0)	0 (0.0)	80 (3.7)	87 (6.6)	88 (4.3)	80 (5.2)	72 (3.7)	1 (1.0)
Campanul-	*Wahlenbergia tumidifructa*	92 (1.6)	92 (1.6)	81 (3.0)	85 (2.5)	88 (3.3)	0 (0.0)	83 (5.0)	84 (1.6)	78 (8.1)	84 (5.2)	92 (4.3)	8 (4.9)	76 (3.7)	82 (3.8)	78 (2.6)	70 (6.2)	71 (5.0)	0 (0.0)
Caryophyll-	*Polycarpaea corymbosa*	3 (1.9)	79 (6.4)	100 (0.0)	98 (2.0)	96 (1.6)	98 (1.2)	7 (1.0)	81 (9.7)	94 (2.0)	94 (2.6)	95 (3.0)	96 (2.8)	3 (1.9)	96 (2.3)	100 (0.0)	97 (1.9)	97 (1.0)	95 (2.5)
Chenopodi-	*Dysphania rhadinostachya*	2 (2.0)	32 (4.3)	6 (1.2)	9 (1.9)	2 (1.2)	4 (1.6)	10 (2.0)	35 (5.3)	28 (5.9)	20 (5.7)	24 (3.3)	33 (5.0)	11 (3.0)	23 (4.4)	6 (3.5)	4 (1.6)	7 (3.4)	4 (1.6)
Cleom-	*Cleome viscosa*	0 (0.0)	0 (0.0)	16 (1.6)	3 (1.0)	3 (1.0)	5 (1.9)	0 (0.0)	0 (0.0)	42 (8.4)	24 (4.9)	14 (2.0)	22 (2.0)	0 (0.0)	0 (0.0)	36 (5.2)	26 (2.9)	23 (1.9)	31 (4.1)
Convolvul-	*Convolvulus clementii*	53 (5.0)	87 (2.5)	92 (4.3)	89 (1.9)	88 (3.7)	96 (0.0)	90 (1.2)	93 (1.9)	91 (4.1)	92 (2.3)	96 (2.3)	95 (3.0)	94 (3.8)	82 (2.0)	87 (1.0)	97 (1.9)	98 (1.2)	97 (1.0)
Cyper-	*Cyperus ixiocarpus*	0 (0.0)	0 (0.0)	2 (1.2)	30 (6.6)	54 (8.7)	84 (7.83)	0 (0.0)	0 (0.0)	2 (1.2)	18 (5.0)	67 (5.3)	87 (4.4)	0 (0.0)	0 (0.0)	2 (1.2)	15 (1.9)	68 (4.6)	86 (2.6)
Dilleni-	*Hibbertia glaberrima*	n/t	n/t	n/t	0 (0.0)	n/t	0 (0.0)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	0 (0.0)	n/t	0 (0.0)
Fab-	*Acacia acradenia*	59 (12.1)	99 (1.3)	100 (0.0)	100 (0.0)	99 (1.3)	100 (0.0)	64 (7.2)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)	43 (9.2)	99 (1.3)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)
Fab-	*Acacia adoxa* var. *adoxa*	n/t	n/t	n/t	98 (1.2)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t

Fab-	*Acacia adsurgens*	95 (2.0)	99 (1.3)	99 (1.3)	100 (0.0)	99 (1.3)	100 (0.0)	99 (1.3)	98 (2.5)	100 (0.0)	98 (1.4)	98 (2.5)	96 (2.4)	99 (1.3)	95 (3.5)	100 (0.0)	99 (1.3)	100 (0.0)	99 (1.3)
Fab-	*Acacia ancistrocarpa*	80 (1.6)	90 (2.6)	98 (2.0)	97 (1.9)	98 (1.2)	97 (3.0)	82 (2.6)	90 (2.6)	98 (1.2)	96 (1.6)	96 (1.6)	96 (1.6)	76 (1.6)	90 (3.5)	96 (2.3)	96 (1.6)	95 (3.0)	93 (3.4)
Fab-	*Acacia bivenosa*	97 (3.0)	90 (5.8)	98 (2.0)	95 (1.9)	96 (1.6)	49 (19.6)	92 (1.6)	99 (1.0)	100 (0.0)	99 (1.0)	99 (1.0)	28 (12.3)	94 (2.0)	97 (1.0)	98 (1.2)	97 (1.9)	97 (1.9)	74 (9.0)
Fab-	*Acacia citrinoviridis*	93 (2.5)	94 (3.2)	99 (1.3)	100 (0.0)	100 (0.0)	96 (2.4)	95 (2.9)	100 (0.0)	98 (1.4)	95 (2.0)	98 (1.4)	100 (0.0)	93 (3.2)	95 (2.0)	99 (1.3)	100 (0.0)	96 (2.4)	99 (1.3)
Fab-	*Acacia cowleana*	98 (1.2)	98 (2.0)	99 (1.0)	98 (1.2)	99 (1.0)	99 (1.0)	100 (0.0)	97 (1.9)	98 (1.2)	97 (3.0)	75 (4.1)	92 (2.8)	99 (1.0)	100 (0.0)	100 (0.0)	98 (2.0)	99 (1.0)	95 (1.9)
Fab-	*Acacia dictyophleba*	97 (1.0)	94 (2.0)	100 (0.0)	97 (1.9)	100 (0.0)	97 (1.9)	97 (1.9)	97 (1.0)	97 (1.9)	95 (1.0)	98 (1.2)	99 (1.0)	96 (1.6)	98 (1.2)	98 (1.2)	92 (3.3)	97 (1.0)	98 (1.2)
Fab-	*Acacia eriopoda*	49 (9.9)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)	99 (1.0)	45 (2.5)	97 (1.0)	100 (0.0)	100 (0.0)	99 (1.0)	98 (1.2)	58 (6.8)	97 (1.0)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)
Fab-	*Acacia hamersleyensis*	99 (1.0)	99 (1.0)	100 (0.0)	100 (0.0)	99 (1.0)	97 (1.9)	99 (1.0)	99 (1.0)	99 (1.0)	100 (0.0)	98 (1.2)	100 (0.0)	97 (1.0)	98 (1.2)	99 (1.0)	100 (0.0)	98 (1.2)	99 (1.0)
Fab-	*Acacia hilliana*	94 (2.6)	98 (1.2)	98 (1.2)	97 (1.9)	98 (1.2)	95 (2.5)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Fab-	*Acacia inaequilatera*	98 (1.2)	97 (1.0)	97 (1.9)	100 (0.0)	97 (1.9)	99 (1.0)	95 (1.9)	100 (0.0)	95 (1.9)	97 (1.9)	100 (0.0)	100 (0.0)	98 (2.0)	99 (1.0)	97 (1.9)	100 (0.0)	99 (1.0)	97 (3.0)
Fab-	*Acacia monticola*	61 (5.7)	98 (1.2)	99 (1.0)	99 (1.0)	99 (1.0)	95 (2.5)	59 (8.1)	98 (1.2)	98 (1.2)	98 (2.0)	98 (1.2)	98 (2.0)	53 (10.4)	97 (1.9)	99 (1.0)	99 (1.0)	99 (1.0)	93 (5.7)
Fab-	*Acacia ptychophylla*	n/t	n/t	n/t	97 (1.0)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t

Fab-	*Acacia pyrifolia* var. *pyrifolia*	95 (1.9)	100 (0.0)	99 (1.0)	98 (1.2)	99 (1.0)	98 (2.0)	98 (1.2)	97 (1.9)	94 (2.6)	95 (3.8)	85 (2.5)	99 (1.0)	95 (2.5)	92 (3.7)	95 (2.5)	96 (2.8)	97 (1.9)	99 (1.0)
Fab-	*Acacia sclerosperma* subsp. *sclerosperma*	47 (7.0)	66 (2.6)	72 (3.3)	82 (2.6)	87 (3.0)	58 (7.8)	31 (4.4)	60 (3.7)	78 (3.5)	78 (4.2)	87 (5.3)	54 (7.8)	39 (3.4)	71 (6.8)	80 (2.8)	81 (2.5)	88 (3.3)	79 (3.4)
Fab-	*Acacia stellaticeps*	85 (2.5)	94 (1.2)	99 (1.0)	96 (1.6)	96 (1.6)	99 (1.0)	87 (4.1)	94 (2.6)	97 (1.0)	98 (2.0)	97 (1.0)	96 (1.6)	83 (4.1)	98 (1.2)	98 (1.2)	97 (1.0)	97 (1.9)	98 (1.2)
Fab-	*Acacia tenuissima*	95 (2.5)	97 (1.0)	99 (1.0)	99 (1.0)	99 (1.0)	98 (1.2)	94 (2.56)	98 (1.2)	97 (1.9)	97 (1.9)	99 (1.0)	98 (1.2)	98 (1.2)	99 (1.0)	100 (0.0)	99 (1.0)	98 (1.2)	96 (2.8)
Fab-	*Acacia tumida* var. *pilbarensis*	75 (3.0)	93 (3.0)	93 (3.4)	99 (1.0)	93 (3.4)	93 (1.9)	78 (3.8)	99 (1.0)	99 (1.0)	96 (2.8)	91 (2.5)	92 (4.3)	78 (1.2)	97 (1.9)	98 (2.0)	98 (1.2)	99 (1.0)	97 (1.9)
Fab-	*Gompholobium oreophilum**	n/t	n/t	n/t	70.0 (5.0)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Fab-	*Indigofera monophylla*	5 (3.0)	9 (4.4)	11 (4.1)	2 (1.2)	5 (2.5)	5 (2.5)	4 (2.3)	3 (1.9)	9 (1.0)	8 (2.8)	4 (4.0)	5 (1.9)	3 (1.0)	3 (1.9)	8 (2.8)	6 (2.6)	5 (1.0)	9 (4.1)
Fab-	*Mirbelia viminalis*	32 (13.6)	96 (2.3)	89 (3.4)	85 (1.9)	91 (1.0)	96 (2.8)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Fab-	*Petalostylis labicheoides*	n/t	n/t	n/t	96 (1.6)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Fab-	*Senna artemisioides* subsp. *oligophylla*	0 (0.0)	79 (1.9)	79 (5.5)	75 (4.4)	74 (2.6)	77 (9.9)	0 (0.0)	76 (5.9)	77 (4.4)	78 (4.8)	82 (3.5)	76 (4.9)	0 (0.0)	75 (6.4)	75 (3.0)	65 (7.2)	80 (3.3)	68 (9.1)
Fab-	*Senna glutinosa* subsp. *pruinosa*	23 (1.0)	94 (2.6)	90 (2.6)	92 (1.6)	84 (3.7)	51 (9.6)	36 (5.9)	93 (1.9)	95 (3.8)	96 (1.6)	82 (6.6)	69 (6.0)	54 (3.5)	88 (1.6)	90 (3.5)	89 (3.0)	94 (3.8)	95 (3.0)
Fab-	*Senna notabilis*	96 (1.6)	98 (1.2)	100 (0.0)	100 (0.0)	100 (0.0)	100 (0.0)	89 (4.1)	91 (2.5)	98 (1.2)	100 (0.0)	100 (0.0)	100 (0.0)	89 (1.9)	95 (2.5)	100 (0.0)	100 (0.0)	100 (0.0)	99 (1.0)

Fab-	*Senna venusta*	58 (3.8)	88 (4.3)	83 (5.3)	78 (3.5)	92 (4.9)	98 (1.2)	49 (3.4)	88 (5.4)	81 (3.4)	73 (5.7)	91 (3.8)	90 (1.2)	44 (9.5)	89 (5.5)	100 (0.0)	72 (5.4)	85 (7.5)	96 (2.3)
Fab-	*Tephrosia* sp. Fortescue (A.A. Mitchell 606)	0 (0.0)	1 (1.0)	0 (0.0)	2 (2.0)	4 (1.6)	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.0)	2 (1.2)	5 (3.0)	4 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (2.0)	6 (3.8)	1 (1.0)
Goodeni-	*Goodenia armitiana*	9 (1.9)	27 (3.4)	59 (5.0)	84 (2.8)	25 (6.0)	3 (1.0)	45 (3.8)	91 (2.5)	97 (1.9)	95 (1.9)	89 (1.9)	43 (1.0)	45 (3.8)	93 (1.0)	97 (1.9)	97 (1.9)	71 (2.5)	18 (3.5)
Goodeni-	*Goodenia stobbsiana*	0 (0.0)	1 (1.0)	2 (1.2)	0 (0.0)	1 (1.0)	0 (0.0)	0 (0.0)	31 (7.6)	86 (4.8)	70 (4.2)	45 (6.4)	33 (5.7)	0 (0.0)	3 (3.0)	2 (2.0)	2 (2.0)	0 (0.0)	0 (0.0)
Goodeni-	*Goodenia triodiophila*	6 (3.8)	66 (1.2)	79 (4.1)	98 (1.2)	98 (1.2)	77 (9.0)	13 (5.3)	74 (3.5)	96 (1.6)	99 (1.0)	99 (1.0)	88 (4.3)	34 (4.8)	92 (2.3)	97 (1.0)	100 (0.0)	96 (1.6)	88 (4.3)
Goodeni-	*Goodenia vilmoriniae*	0 (0.0)	3 (1.9)	2 (1.2)	0 (0.0)	1 (1.0)	1 (1.0)	3 (3.0)	18 (6.8)	25 (6.0)	23 (4.4)	31 (6.4)	33 (4.1)	0 (0.0)	18 (2.6)	5 (3.8)	6 (3.5)	12 (1.6)	6 (1.2)
Goodeni-	*Velleia panduriformis*	0 (0.0)	2 (2.0)	0 (0.0)	1 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.0)	7 (1.9)	12 (2.8)	1 (1.0)	0 (0.0)	0 (0.0)	7 (3.4)	1 (1.0)	9 (1.9)	3 (1.0)	0 (0.0)
Lami-	*Newcastelia cladotricha*	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Lami-	*Newcastelia* sp. Hamersley Range (S. van Leeuwen 4264)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Malv-	*Abutilon otocarpum*	40 (1.6)	64 (7.5)	57 (4.4)	51 (3.0)	55 (7.7)	50 (8.3)	67 (7.7)	62 (4.2)	64 (4.3)	62 (2.0)	58 (4.8)	57 (5.7)	48 (5.9)	60 (5.9)	57 (9.0)	61 (7.9)	51 (4.1)	60 (7.5)
Malv-	*Androcalva luteiflora*	35 (4.1)	83 (4.7)	78 (7.0)	74 (4.8)	53 (7.7)	62 (5.3)	37 (3.0)	82 (3.8)	81 (5.5)	60 (3.3)	48 (3.7)	57 (12.3)	25 (8.1)	81 (2.5)	72 (4.3)	65 (6.6)	60 (7.1)	64 (5.4)
Malv-	*Corchorus crozophorifolius*	n/t	n/t	n/t	86 (4.8)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t

Malv-	*Corchorus* aff. *lasiocarpus*	20 (1.6)	65 (5.3)	87 (4.7)	91 (1.9)	89 (9.7)	84 (3.3)	19 (3.8)	91 (3.0)	95 (1.9)	92 (2.8)	92 (2.3)	95 (2.5)	1 (1.0)	73 (5.5)	93 (1.9)	95 (1.9)	96 (2.3)	97 (1.0)
Malv-	*Gossypium australe**	n/t	n/t	n/t	38 (5.7)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Malv-	*Gossypium robinsonii**	n/t	n/t	n/t	72 (0.0)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Malv-	*Hibiscus haynaldii*	0 (0.0)	18 (6.8)	44 (6.7)	45 (4.4)	40 (7.5)	19 (5.7)	7 (3.0)	64 (5.9)	85 (1.9)	87 (3.0)	71 (3.4)	62 (7.8)	0 (0.0)	12 (3.7)	36 (5.2)	46 (2.0)	56 (6.3)	42 (5.0)
Malv-	*Sida echinocarpa*	79 (4.4)	94 (2.6)	95 (5.0)	92 (1.6)	82 (3.5)	95 (1.9)	100 (0.0)	100 (0.0)	97 (1.9)	93 (3.0)	91 (6.6)	94 (2.0)	80 (3.3)	90 (2.6)	88 (2.3)	81 (4.4)	82 (5.8)	98 (2.0)
Myrt-	*Eucalyptus gamophylla*	77 (4.1)	71 (7.4)	65 (9.2)	77 (2.5)	80 (1.6)	79 (3.8)	68 (5.7)	60 (5.4)	75 (1.9)	75 (5.3)	68 (2.3)	74 (5.0)	66 (2.6)	72 (1.6)	83 (3.0)	83 (3.4)	77 (3.0)	80 (2.8)
Myrt-	*Eucalyptus leucophloia* subsp. *leucophloia*	80 (4.3)	93 (2.5)	98 (1.2)	97 (1.0)	98 (1.2)	96 (1.6)	90 (3.5)	96 (2.8)	97 (3.0)	100 (0.0)	98 (2.0)	95 (2.5)	88 (2.8)	97 (1.0)	98 (1.2)	100 (0.0)	100 (0.0)	97 (1.9)
Myrt-	*Melaleuca glomerata*	63 (8.9)	100 (0.0)	99 (1.0)	90 (2.6)	96 (4.0)	97 (1.0)	30 (12.3)	83 (6.6)	95 (1.9)	93 (1.9)	94 (3.8)	95 (1.9)	19 (7.6)	100 (0.0)	99 (1.0)	93 (2.5)	92 (3.7)	93 (2.5)
Nyctagin-	*Boerhavia coccinea*	0 (0.0)	0 (0.0)	20 (2.3)	13 (4.1)	4 (1.6)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.2)	16 (2.3)	12 (1.6)	12 (4.3)	0 (0.0)	10 (3.5)	45 (3.0)	38 (6.0)	15 (6.2)	11 (2.5)
Po-	*Aristida contorta*	0 (0.0)	0 (0.0)	9 (3.8)	41 (6.0)	31 (1.9)	30 (2.6)	2 (2.0)	9 (2.7)	25 (3.5)	61 (4.8)	39 (1.3)	32 (4.6)	0 (0.0)	0 (0.0)	17 (2.5)	10 (3.8)	22 (4.2)	30 (4.8)
Po-	*Aristida inaequiglumis*	89 (3.4)	91 (3.8)	90 (4.8)	97 (1.9)	82 (3.5)	80 (5.2)	86 (3.8)	85 (4.4)	98 (2.0)	87 (2.5)	84 (2.8)	81 (1.9)	84 (3.3)	84 (5.9)	91 (3.4)	95 (3.8)	87 (2.5)	88 (3.7)
Po-	*Aristida latifolia*	23 (10.9)	67 (6.8)	74 (4.8)	61 (5.0)	22 (2.0)	10 (2.6)	79 (3.0)	95 (2.5)	95 (3.0)	89 (4.4)	86 (1.2)	69 (5.3)	20 (4.3)	78 (2.6)	76 (4.3)	57 (5.7)	21 (6.8)	7 (3.4)

Po-	*Cymbopogon ambiguus*	8 (1.6)	89 (2.5)	78 (5.3)	90 (4.8)	89 (3.0)	89 (2.5)	51 (1.0)	88 (3.3)	91 (2.5)	82 (3.5)	84 (2.8)	91 (3.8)	4 (2.8)	86 (4.2)	90 (4.8)	93 (3.4)	94 (3.5)	90 (1.2)
Po-	*Cymbopogon obtectus*	0 (0.0)	64 (3.7)	93 (2.5)	94 (1.2)	89 (3.0)	91 (3.4)	10 (4.2)	85 (4.1)	97 (1.9)	99 (1.0)	95 (1.9)	97 (1.9)	3 (1.9)	79 (4.1)	90 (2.0)	95 (2.5)	94 (2.0)	95 (3.8)
Po-	*Cynodon convergens*	0 (0.0)	0 (0.0)	3 (1.9)	10 (3.8)	15 (3.4)	21 (4.4)	0 (0.0)	0 (0.0)	15 (4.7)	40 (6.3)	40 (5.7)	69 (4.7)	0 (0.0)	0 (0.0)	0 (0.0)	9 (4.1)	11 (3.0)	26 (2.0)
Po-	*Enneapogon caerulescens*	1 (1.0)	6 (4.8)	31 (8.7)	57 (8.7)	36 (6.3)	34 (3.5)	3 (1.9)	19 (1.0)	39 (5.3)	62 (8.3)	63 (5.0)	46 (2.0)	0 (0.0)	1 (1.0)	2 (2.0)	5 (1.9)	8 (5.7)	14 (2.6)
Po-	*Enneapogon polyphyllus*	0 (0.0)	4 (1.6)	11 (3.0)	19 (1.0)	23 (3.0)	15 (4.4)	7 (2.5)	16 (3.7)	19 (1.9)	54 (9.6)	56 (2.8)	74 (4.2)	0 (0.0)	0 (0.0)	8 (1.6)	7 (4.4)	21 (4.7)	9 (2.5)
Po-	*Enneapogon robustissimus*	8 (1.6)	50 (4.2)	52 (3.7)	81 (4.7)	78 (6.0)	66 (4.2)	69 (8.4)	78 (5.8)	82 (6.2)	99 (1.0)	99 (1.0)	97 (1.9)	9 (4.4)	53 (1.0)	83 (3.4)	81 (4.4)	85 (4.1)	60 (7.1)
Po-	*Eragrostis dielsii*	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (1.2)	0 (0.0)	0 (0.0)	0 (0.0)	3 (1.0)	0 (0.0)	2 (1.2)	2 (2.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.0)	0 (0.0)	2 (1.2)
Po-	*Eragrostis eriopoda*	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (2.0)	1 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Po-	*Eragrostis tenellula*	0 (0.0)	0 (0.0)	0 (0.0)	2 (2.0)	1 (1.0)	1 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)	21 (7.2)	1 (1.0)	2 (1.2)	0 (0.0)	0 (0.0)	1 (1.0)	2 (1.2)	1 (1.0)	8 (3.3)
Po-	*Eriachne pulchella* subsp. *dominii*	0 (0.0)	0 (0.0)	24 (13.9)	71 (4.7)	67 (4.1)	84 (2.8)	0 (0.0)	0 (0.0)	96 (1.6)	96 (2.3)	96 (2.3)	100 (0.0)	0 (0.0)	0 (0.0)	14 (4.8)	96 (1.6)	85 (1.9)	89 (2.5)
Po-	*Neurachne muelleri*	0 (0.0)	2 (1.2)	4 (1.6)	10 (2.6)	6 (2.6)	4 (1.6)	7 (3.0)	62 (6.2)	75 (3.4)	77 (1.9)	77 (2.5)	79 (1.9)	0 (0.0)	0 (0.0)	3 (1.0)	12 (1.6)	13 (2.5)	7 (3.0)
Po-	*Triodia angusta*	0 (0.0)	0 (0.0)	1 (1.0)	4 (2.3)	3 (1.0)	6 (2.0)	0 (0.0)	7 (3.0)	10 (4.8)	10 (2.6)	22 (4.2)	23 (5.3)	0 (0.0)	12 (1.6)	29 (1.0)	45 (1.9)	38 (6.0)	45 (2.5)

Po-	*Triodia basedowii*	0 (0.0)	2 (1.2)	15 (3.4)	18 (4.8)	18 (2.6)	19 (1.0)	0 (0.0)	13 (5.3)	19 (3.4)	32 (1.6)	27 (1.9)	28 (7.1)	0 (0.0)	18 (2.6)	42 (2.6)	54 (8.1)	40 (5.9)	40 (4.6)
Po-	*Triodia brizoides*	0 (0.0)	6 (2.6)	9 (6.4)	5 (1.0)	10 (2.6)	10 (2.0)	0 (0.0)	14 (5.8)	24 (4.3)	29 (8.9)	11 (3.0)	17 (3.0)	0 (0.0)	60 (5.9)	70 (5.3)	62 (4.8)	74 (7.4)	68 (3.3)
Po-	*Triodia epactia*	0 (0.0)	15 (3.8)	55 (4.4)	59 (3.4)	39 (10.3)	57 (8.7)	0 (0.0)	14 (3.5)	56 (5.9)	66 (6.8)	62 (3.5)	68 (4.9)	0 (0.0)	23 (6.0)	69 (3.0)	63 (4.7)	69 (1.9)	75 (3.4)
Po-	*Triodia melvillei*	0 (0.0)	30 (4.2)	42 (6.8)	57 (3.4)	47 (3.4)	57 (5.5)	n/t	n/t	n/t	n/t	n/t	n/t	0 (0.0)	22 (3.5)	43 (3.4)	61 (7.0)	73 (6.6)	59 (1.9)
Po-	*Triodia pungens*	0 (0.0)	33 (3.4)	38 (5.0)	37 (5.5)	33 (1.0)	35 (1.9)	0 (0.0)	36 (5.9)	40 (4.3)	55 (4.4)	60 (7.1)	56 (5.9)	0 (0.0)	70 (7.6)	89 (1.0)	89 (2.5)	92 (2.8)	80 (2.8)
Po-	*Triodia* sp. Shovelanna Hill (S. van Leeuwen 3835)	0 (0.0)	19 (4.1)	40 (1.0)	20 (1.6)	35 (7.2)	29 (5.0)	6 (3.5)	35 (6.4)	61 (4.4)	50 (3.8)	48 (4.9)	43 (4.4)	0 (0.0)	28 (6.3)	67 (4.1)	43 (5.3)	34 (7.4)	39 (1.9)
Po-	*Triodia wiseana*	23 (3.4)	21 (1.9)	28 (5.9)	25 (3.8)	33 (6.6)	31 (5.7)	31 (1.9)	28 (6.3)	42 (4.8)	42 (7.0)	42 (3.8)	45 (4.4)	57 (4.1)	61 (4.4)	74 (7.4)	63 (1.9)	82 (6.2)	71 (1.9)
Portulac-	*Calandrinia schistorhiza*	32 (6.7)	70 (6.6)	91 (1.9)	81 (2.5)	88 (2.8)	79 (7.2)	74 (2.0)	82 (3.5)	83 (4.1)	89 (2.5)	94 (2.6)	64 (7.1)	29 (6.6)	64 (6.7)	69 (9.6)	88 (4.3)	79 (1.9)	27 (10.9)
Portulac-	*Portulaca oleracea*	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)	40 (14.0)	95 (1.0)	93 (1.9)	89 (4.4)	96 (1.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Prote-	*Grevillea pyramidalis* subsp. *leucadendron*	39 (5.5)	74 (3.9)	100 (0.0)	98 (1.2)	94 (2.4)	90 (4.1)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Prote-	*Grevillea refracta* subsp. *refracta*	0 (0.0)	28 (10.1)	61 (10.7)	80 (4.6)	35 (3.5)	28 (6.0)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Prote-	*Grevillea stenobotrya*	10 (6.2)	97 (1.0)	77 (6.0)	1 (1.0)	0 (0.0)	0 (0.0)	18 (4.8)	95 (1.9)	94 (1.2)	7 (1.9)	0 (0.0)	0 (0.0)	57 (2.5)	99 (1.0)	100 (0.0)	49 (4.4)	0 (0.0)	0 (0.0)

Prote-	*Grevillea wickhamii* subsp. *hispidula*	1 (1.0)	2 (2.0)	40 (6.3)	76 (2.8)	6 (1.2)	11 (4.1)	0 (0.0)	6 (3.5)	41 (4.4)	60 (5.4)	12 (1.6)	22 (4.8)	0 (0.0)	54 (8.9)	98 (1.2)	98 (1.2)	46 (2.6)	31 (5.7)
Prote-	*Grevillea wickhamii* subsp. *macrodonta*	3 (1.0)	25 (1.9)	76 (5.9)	68 (7.8)	22 (2.0)	22 (3.5)	15 (3.4)	55 (5.7)	86 (2.6)	84 (2.3)	34 (1.2)	31 (4.4)	8 (1.6)	79 (1.9)	93 (3.0)	91 (1.0)	53 (4.7)	41 (1.9)
Prote-	*Hakea lorea* subsp. *lorea*	n/t	n/t	n/t	91 (4.1)	44 (5.8)	17 (5.7)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Sapind-	*Diplopeltis stuartii* var. *stuartii*	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Sapind-	*Dodonaea coriacea*	0 (0.0)	88 (2.8)	91 (4.1)	91 (5.3)	95 (3.0)	93 (3.4)	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t	n/t
Solan-	*Solanum dioicum*	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	12 (3.3)	10 (2.6)	5 (1.9)	7 (1.0)	0 (0.0)	0 (0.0)	15 (4.4)	2 (2.0)	1 (1.0)	2 (1.2)
Solan-	*Solanum diversiflorum*	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Stylidi-	*Stylidium desertorum*	0 (0.0)	10 (5.0)	3 (1.9)	26 (2.6)	25 (1.0)	8 (3.3)	0 (0.0)	62 (9.5)	74 (7.4)	95 (1.0)	97 (1.0)	86 (2.6)	0 (0.0)	61 (11.6)	55 (7.2)	72 (7.1)	92 (2.3)	35 (4.8)
Surian-	*Stylobasium spathulatum*	2 (1.2)	63 (3.4)	81 (3.4)	77 (5.0)	81 (3.0)	78 (3.5)	1 (1.0)	63 (8.7)	78 (1.2)	86 (3.8)	88 (4.3)	85 (3.4)	4 (4.0)	72 (1.6)	73 (3.0)	79 (1.9)	78 (3.8)	73 (5.0)
Zygophyll-	*Tribulus suberosus*	n/t	n/t	n/t	0 (0.0)	0 (0.0)	0 (0.0)	n/t	n/t	n/t	2 (2.0)	0 (0.0)	1 (1.0)	n/t	n/t	n/t	1 (1.0)	0 (0.0)	1 (1.0)

n/t = not tested; ^ = standard error information unavailable; * species clearly possess seeds with physical dormancy, however, there is potential evidence of combinational dormancy being present due to germination not exceeding 75% and variable responses to multiple heat treatments (Erickson *et al.* 2016a).

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