Fl. Medit. 29: 269-306
https://doi.org/10.7320/FlMedit29.269
Version of Record published online on 30 December 2019

Mediterranean plant germination reports – 1

edited by Sara Magrini & Cristina Salmeri

Abstract

Magrini, S. & Salmeri, C. S. (eds): Mediterranean plant germination reports – 1. — Fl. Medit. 29: 269-306. 2019. — ISSN: 1120-4052 printed, 2240-4538 online.

This is the first issue of a new series of germination reports from Mediterranean areas (sensu Med-Checklist). It comprises germination protocols for 18 taxa: *Abies* from Sicily by A. Scialabba (No. 1); *Centaurea*, *Cyperus*, *Launaea*, *Medicago*, *Muscari*, *Ononis*, *Pancratium*, *Plantago*, and *Thinopyrum* from Sicily by C. Salmeri & M. Trubia (Nos 2-10); *Anthemis*, *Crucianella*, *Eryngium*, and *Thinopyrum* from Sardinia by M. Porceddu & al. (Nos 11-14); *Centaurea*, *Jacobaea*, *Matthiola*, *Medicago*, *Pancratium*, and *Silene* from central Italy by S. Magrini & al. (Nos 15-20); *Sporobolus* and *Juncus* from central Italy by G. Fabrini (Nos 21-22).

Editorial

This new series of germination reports of Mediterranean plants will be published in Flora Mediterranea, as announced during the XVI OPTIMA Meeting held in Athens this year. The proposal of this new column originated by RIBES, the Italian network of seed banks, as part of its conservation strategy to 2020. The geographical coverage extends to all countries included in Med-Checklist, plus Austria, Switzerland, the Canary Islands, Madeira and the Azores.

Only germination report with high germination percentages (> 80%) which are new for any individual territory, or better than published ones, may be accepted for publication. Deviations from this standard can be taken into account if duly justified.

Each contribution should present all the relevant details of tested germination protocols, including mandatory information on:

– seed accession data, with full collection details (locality, habitat, date, collector name), the accession code and the seed-bank name;
– germination data: pre-treatments (e.g. scarification, priming, stratification, sterilization); germination media; number of seeds and replicates for each test; culture conditions (temperature and photoperiod);

– germination results summarized in a table using common germination indices.

For the preparation of the manuscript, please, follow the instructions reported below also published at http://www.herbmedit.org/guide.html.

Authors are invited to submit their manuscript in English to one of the editors.

There is currently no special column devoted to seed germination in other scientific journals, so "Mediterranean plant germination reports" could surely become a useful tool for conservationists, botanists, and other specialists. Moreover, these germination data will flow into an online, open-access database managed by RIBES association in order to make them available to a wider audience.

Instructions to author for "Mediterranean plant germination reports"

This series of articles will be a separate section published alongside the other articles of *Flora Mediterranea*. These contributions do not follow the structure of standard papers in the journal but have their own format. For the preparation of the manuscript follow the lay-out of the published contributions and the Instructions to authors of Flora Mediterranea (http://www.herbmedit.org/guide.html) for the style.

Only germination report with high germination percentages (> 80%) which are new for any individual territory (according to *Med-Checklist*), or better than published ones, may be accepted for publication. Deviations from this standard can be taken into account if justified.

Each contribution should present all the relevant details of tested germination protocols. They should include mandatory information on:

Seed accession data

The following format is to be used: Country and/or political subdivision (according to Med-Checklist): Locality (WGS84 coordinates in decimal degrees), habitat, altitude, date, *collector/s* (accession code and seed-bank name).

Germination data

Pre-treatments (e.g. scarification, priming, stratification, sterilization); germination media; number of seeds and replicates for each test; culture conditions (temperature and photoperiod); results summarized in a table through the following common germination indices:

– final germination percentage (G);
– germination delay, i.e. the first radicle emergence (T_1, in days);
– median germination time, i.e. the time to reach 50% of final/maximum germination (T_{50}, in days) estimated according to the formula: $T_{50} = [(G/2 - G_1) \times (t_2 - t_1)]/(G_2 - G_1) + t_1$, where G_1 is the germination percentage immediately lower than G/2, G_2 is the germination percentage immediately higher than G/2, t_1 and t_2 the number of days to reach G_1 and G_2, respectively;
– maximum germination time, i.e. the last radicle emergence (T_{max}, in days);

– mean time to germination (MTG, in days) estimated according to the formula: MTG = $\Sigma (n_i \times d_i)/N$, where n_i is the number of germinated seeds at day i, d_i the incubation period in days at day i, and N the total number of germinated seeds in the treatment.

An "Observations" section may be used for additional information, also including alternative methods or comparative evaluation of existing germination data from other geographical areas.

Good quality images of germinated seeds may be added.

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