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Seeds of exotic morningglories can be completely killed by torching and subsequent water immersion

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Summary:
The effects of dry heat and torching on seed germination in exotic morningglories (*Ipomoea triloba, I. lacunosa, I. purpurea, I. hederacea* var. *integriuscula, I. coccinea*) were investigated; we also studied seed survival after torching and subsequent immersion in water. When seeds were dry-heated at 80°C for 30minutes, germination was 21.1~97.8%. Germination rates after this treatment were low for *I. lacunosa* and *I. purpurea* (21.1% and 47.8%, respectively), but much higher in the other 3 species (72.2~97.8%). When the seeds were torched for 3 seconds, all five species exhibited almost complete germination (94.4~100.0%). The seeds of the five morningglories were completely killed by water immersion for two months following torching. These findings suggest that by flooding fields with water following burning of the soil surface after seed dispersal it is possible to effectively manage *Ipomoea* species.

Keywords: exotic morningglories, physical dormancy, dry heat, flaming, flooding

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