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# 101 Ways to Try to Grow Arabidopsis: Do Seeds Need to Be Misted to Germinate?

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## Purdue Methods:



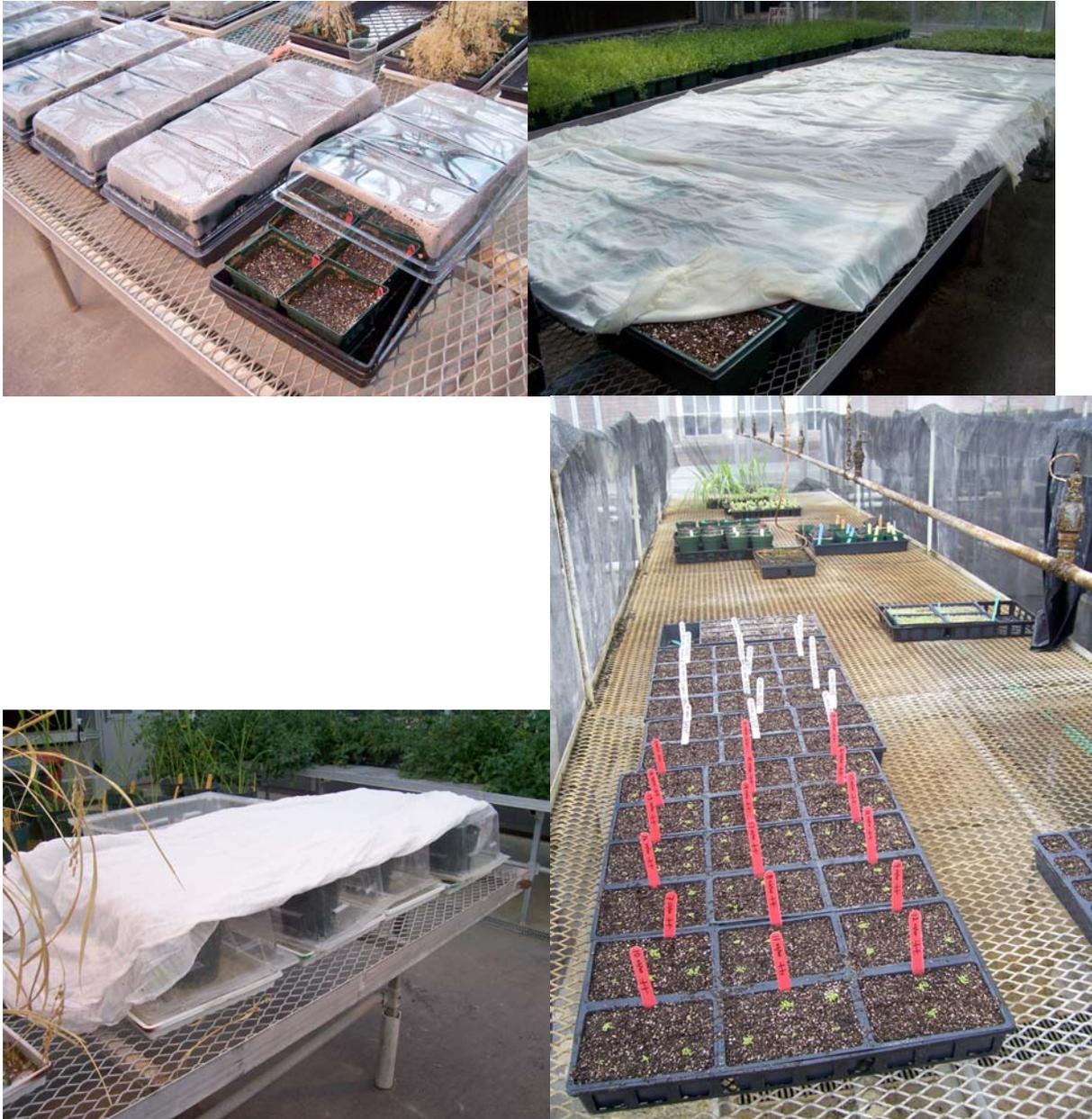
### Do seeds need to be misted to germinate?

#### Short answer:

No

#### Discussion:

We did not examine germination rate in our study, but have made visual observations between treatments in other studies (no data). Seeds grown under intermittent mist (10 seconds every 8 minutes) appeared to have better germination than plants not under mist. However, a vast majority of our *Arabidopsis* is not germinated under mist due to limitations of space in this specially-equipped propagation area. Plastic wrap or clear plastic domes designed to fit over planting trays also appear to improve germination, unless used in bright sunlight when temperatures under the dome can exceed 40C. This can be remedied by covering the dome with muslin or cheesecloth, venting the dome or propping the dome up for air circulation. Some researchers, including the first reports on growing this species (8) suggest using muslin kept moist by fine spraying until cotyledon expansion begins. Mist systems are recommended for lines that seed is extremely limited, therefore a benefit be gained from improved germination percentage. Commercial systems can be plumbed in using copper pipes and electronic controller units operating solenoid valves. We've constructed simple mist systems from nozzles, pvc pipe and hose connectors that can be stored when not in use.



**Figure 1. From top left, clockwise: Clear plastic domes covering seeds; Moistened cheesecloth over group of trays; Permanent mist system installation; Cheesecloth covering clear plastic domes to reduce heat build up in sunny greenhouse**



**Figure 2. PVC mist system. The system uses commercially available nozzles and supports, with other parts bought at hardware store. This system is portable and storable. It requires a irrigation timer attached to hose spigot.**