

Protocol
Entering and Exiting a Field Infested with the Parasitic Weed,
Phelipanche ramosa (branched broomrape)

UC Davis Weed Science Group

Date SOP was written: July 23, 2020
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1. Overview: *Phelipanche ramosa* (branched broomrape) is an obligate root parasite that cause severe damage to many economically important broadleaf crops. The species has been discovered in several commercial tomato fields in Yolo County in recent years. Branched broomrape is an “A-listed” noxious weed in California with potentially severe economic consequences if it becomes widely spread. The seeds of branched broomrape are very tiny (0.2 to 0.4 mm) and can hardly be identified when in the soil. Efforts should be made to ensure that a branched broomrape infested field is carefully utilized for research purpose to avoid spreading the problem and causing economic harm to California agricultural industries.

2. Scope: When visiting a branched broomrape infested field for sampling or scouting, the following procedure and precautions should be followed to avoid the spread of the weed seeds:

- ❖ Vehicle needs to be parked at the exit side of the field (as shown in the schematic), about 10 m (30 ft) away, to reduce risks of moving broomrape seeds on vehicle tires.
- ❖ When entering the infested field, disposable coverall and shoe covers must be worn to reduce risk of moving seeds on personal clothing and/or foot wears.

- ❖ Hand gloves must be worn if field activities will involve direct contact of hands with soil or broomrape plant that has seeds.
- ❖ While scouting for broomrape plants in the field, walking in a “W” (or “M”) pattern will provide a better detection rate. Please see the schematic.
- ❖ If multiple people are scouting the same field, they can split the field into multiple “Ws” or “Ms”.
- ❖ It is recommended that the number of detected broomrape plants are documented.
- ❖ When exiting the field, take off the coverall, shoe covers and gloves, at about 5 m away from the main road as shown in the schematic. Do not exit to the main road without removing the covers.
- ❖ The coverall, shoe covers and gloves can be disinfected using a spray bottle containing a quaternary ammonium compound such as but not limited to didecyl dimethyl ammonium chloride, benzalkonium chloride, and dioctyl dimethyl ammonium chloride (Sigma-Aldrich chemical company) with a use rate of about 1 to 5% of solution. The spray bottle should be placed at the exit.
- ❖ The coverall, shoe covers and gloves should be placed in plastic bags at the exit, then transfer to the vehicle.
- ❖ Plastic bags must be autoclaved or burnt: the former is recommended for environmental health.

Schematic for visiting and scouting broomrape infested field

