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SCN Cyst Extraction from Greenhouse Cultures (crocks)

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Protocol status: Working

We use this protocol and it's working

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Abstract

SCN Cyst Extraction from Greenhouse Cultures (crocks)

Materials

Preparing Green House Cultures for Cyst Extraction

1. Gardening shears
2. Cart
3. Gloves
4. 3-gallon bucket

SCN cyst extraction

1. Petri Dishes, small, 60×15mm
2. Trays
3. 20 and 60 Mesh Sieves
4. 3 Gallon Waste Bucket
5. Gray Bucket
6. White Plastic Cutting Board with Hole
7. Wash Bottle, Wide Nozzle
8. Plastic Dish Apron
9. Gloves

Cleaning the crocks

1. Gloves
2. Scrub pad
3. Pipe Cleaner
4. Bleach

Troubleshooting

Preparing Green House Cultures for Cyst Extraction

- 1 Put on gloves to protect hands before beginning preparation
- 2 Using gardening shears, clip off all of the stems on the chosen soybean plant, leaving behind 1-2 inches of the stem. Place stems in the 3-gallon bucket.
- 3 Place crocks on cart for transport back to the lab. Dispose of the soybean clippings in either the steam cart or the compost.

SCN cyst extraction

- 4 *Once you begin this process for a crock you must finish the whole crock within the work day.
- 5 Lay out small petri dishes on a tray and set aside.
- 6 To begin collecting cysts from greenhouse cultures, flood the crock gently with water. Utilize the faucet with long rubber tubing.
- 7 A white cutting board with a hole is placed on-top of a white tub. On top of the cutting board hole place the 20/60 mesh sieves.
- 8 Fill a grey bucket with water and place close to crock.
- 9 Once properly soaked, remove the long skinny tube from the center of the crock, and place aside.
- 10 Choose your first sample. Remove the tag from the sample and set aside. Pull the stem and the tube out of the crock at the same time, being careful not to rip the stem.
- 11 Move the root and tube to the gray wash bucket and gently swirl to dislodge any sand and turface from the tube.
- 12 Place the washed root on top of the 20/60 sieves and blast the roots, with the handheld sprayer, turning the root over periodically to ensure all cysts are properly dislodged. A



good indicator of when all the cysts are removed is when all the surface is dislodged from the roots.

- 13 After checking that the root is thoroughly clear of cysts, dispose of the root in a 3-gallon bucket and rinse 20 sieve briefly.
- 14 Using a wash bottle, wash all material from 60 sieve into a small petri dish. Replace the petri dish lid and place the tag from the corresponding sample on top of the petri dish.
- 15 Repeat steps 6-10 with the remaining tubes.

Cleaning the crocks

- 16 To clean the crocks, you must thoroughly wash all growing substrate and plant matter out of the crock. Scrub the crocks to ensure all previous plant material is removed.
- 17 Place all the pvc tubing into the crock (22 in total, 1 long tube) and fill 80% with water. Fill the rest of the crock with bleach. Let sit for a minimum of 24 hours.
- 18 Drain and let dry.