Soil Sampling to Quantify Clubroot Spores From Soil in North Dakota

Note: Please complete this form in its entirety to identify the soil sample location. The information will be used to compile a distribution map of clubroot infestations in North Dakota.

County: ___________________ Grower’s name: _______________________ Phone: ___________________

(remains confidential)

<table>
<thead>
<tr>
<th>Field ID</th>
<th>Latitude N</th>
<th>Longitude W (-)</th>
<th>OR</th>
<th>Township</th>
<th>Range</th>
<th>Section</th>
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Latitude and longitude in decimal degrees is preferred.

Example: N: 48.659444 W: 98.244444 (GPS coordinates) - GPS coordinates can be obtained through “preferences” or other “setup” functions within the systems software.

Soil Sampling Survey Procedure

1. Walk in a “W” pattern in the field starting from the main entrance of the field (approach), low spots or flooded areas, low pH spots and areas of diseased patches as shown in the figure below.

2. At each sample point, clear away residue on the soil surface and collect soil core or scoop from the top 3 to 6 inches (a representative sample is five scoops or cores from each field). Be sure to maintain 300 feet from point to point of soil collection.

3. Air-dry the soil samples indoors in paper boxes and send or drop them off at one of the following address:

- **Zhaohui Liu**
  Department of Plant Pathology
  NDSU Department 7660
  P.O. Box 6050
  Fargo, ND 58108-6050

- **UPS/FEDEX to Zhaohui Liu**
  Department of Plant Pathology
  Walster Hall 306
  Fargo, ND 58102

- **Venkat Chapara**
  Langdon Research Extension Center
  9280 107th Ave. N.E.
  Langdon, ND 58249
Figure 1. Clubroot on canola. (Venkat Chapara, NDSU)

Figure 2. Canola field infected with clubroot in patches. (Venkat Chapara, NDSU)

Figure 3. Canola fields with clubroot in North Dakota identified from years 2016 to 2019. (Knodel, Hongang and Chapara, 2019)

Figure 4: Canola fields with clubroot in North Dakota identified from years 2016 to 2019. This project is funded by the Northern Canola Growers Association in cooperation with the NDSU Agricultural Experiment Station.

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NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

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