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How to Submit a Soil Sample for Pea/Bean Root Rot Testing

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The Plant Disease Diagnostics Clinic (PDDC) routinely provides testing of agricultural fields that will be in pea or snap bean production to determine the potential for problems with pea or bean root rot. If you are interested in having your soil tested, you can submit a soil sample to the PDDC. **The importance of correct soil sampling cannot be overstressed.** In order to obtain the most accurate estimate of root rot potential in a field, a soil sample must accurately represent the field.

The following (adapted from Sherwood, R.T. and D.J. Hagedorn. Determining the Common Root Rot Potential of Pea Fields. Bulletin 531 of the Agricultural Experiment Station, UW-Madison. April 1958) are suggested guidelines that you should follow when collecting, packaging and shipping a sample to make sure that the sample will arrive in the best possible condition and provide the most accurate results possible. If you will be submitting a sample from out-of-state, please contact the PDDC (see below) for special packaging and mailing instructions.

- **Collect samples at the right time of year.** Sample fields in the fall, after harvesting but before tilling. Tilling brings up soil from below the root zone and could distort the results of the test.
- **Collect the appropriate number of samples.** If a field is less than 40 acres in size, collect a single sample for testing. If a field is greater than 40 acres in size, subdivide the field into equal-sized sections that are less than 40 acres in size and collect a separate sample from each section. For example, a 160 acre field would be subdivided into 4 sections of 40 acres, and four samples would be collected, one from each section. If any section of a field was planted in peas (or beans) within the past 3 years, this section should be sampled and tested separately from the rest of the field.
- **Collect samples appropriately within each sampled area.** Gather each sample by walking a zig-zag or W-shaped path within the sample area. Every 55 to 75 paces, collect approximately 2 cups of soil from the first 4 to 6 inches of the soil profile. **DO NOT** sample below 6 inches. In fields of 10 or fewer acres, collect soil from at least 10 places in the field and be sure to collect at least **5 quarts of soil**. In larger sample areas (up to 40 acres), be sure to collect soil from at least one location per acre and make sure that the total soil sample is **at least 1½ to 2 gallons**. Collect soil from all parts of the sample area, representing different drainage conditions, soil types and elevations. However, **DO NOT** collect soil from small areas of extremely high or low elevation.
- **Store soil samples appropriately.** Double bag each soil sample in plastic bags to prevent spills. Bags can be carried conveniently in a bucket or pail. Keep samples in a cool, dry location prior to submission.
- **Document samples properly.** Assign a code name or number to each soil sample collected. Record the farm name, field location, sampling date, name of sampler, size of the sampled area, and cropping history with respect to peas or beans.
- **Submit samples promptly.** Mail or hand-deliver a sample to the:

**Plant Disease Diagnostics Clinic
Department of Plant Pathology
University of Wisconsin-Madison
1630 Linden Drive
Madison, WI 53706-1598**

PDDC hours are 8:30 am to 4:30 pm Monday through Friday.

For more information or help in diagnosing pea/bean root rot: Contact Brian Hudelson, Department of Plant Pathology, University of Wisconsin-Madison, 1630 Linden Drive, Madison, WI 53706-1598, phone: (608) 262-2863, fax: (608) 263-2626, email: bdh@plantpath.wisc.edu.