

How to Prepare and Submit Weed Samples for Diagnostic Testing

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Proper preparation of weed samples for diagnostic testing is critically important. Failure to properly prepare and submit weed samples can lead to erroneous diagnostic results or prevent tests from being conducted altogether. Proper sample submission is essential in providing managers accurate and timely diagnostic results that assist in conserving labor, financial and technological resources. The following sections of this publication will outline proper techniques for preparing and submitting weed samples for diagnostic testing.



How to Submit a Digital Sample for Weed Identification

- Adding scale — When submitting a digital image for identification, always add a scale reference to the image. Placing a coin, pen, ruler or key next to the weed in question can provide an indication of plant size. Failure to provide a scale reference for plant size can often lead to miss identification.
- Focus on plant morphology — Plants in digital images should be free of soil and debris allowing the photographer to clearly capture plant morphological features. Multiple images may be necessary to highlight the whole plant, leaves (particularly where leaves contact the plant stem), stems/stolons/rhizomes, seed heads or flowers (if possible), roots, and any other potential unique distinguishable characteristic.
- Single plants — Images should focus only on a single weed in question. To have multiple weeds analyzed, each must be submitted separately. If multiple plants surround the weed in question, please remove them before capturing digital images.
- Living plants — Do not submit images of dead or dried weeds.

Images should be sent to weeddiagnostics@utk.edu only after completing an online sample submission form online at www.weeddiagnostics.org.

How to Submit a Physical Weed Sample for Identification or Resistance Testing

- Physically remove the entire weed in question using a spade shovel, golf course cup cutter or similar instrument. See Figure 1 for example tools. Minimum size should be 4 inches by 4 inches with the sample including both aboveground foliage and roots.
- Do not submit dead, dried or stressed plants. Fresh, actively growing tissue is required.

- Package sample in a bag with a moist (not wet) paper towel (Figure 2) and send to the Weed Diagnostics Center via overnight mail. **Make sure to complete the online sample submission form at www.weeddiagnostics.org before mailing a sample to the address below:**

UT Weed Diagnostics Center
112 Plant Biotechnology Building
2505 EJ Chapman Drive
Knoxville, TN 37996

- Submit only a single weed species. To have multiple weed species analyzed, submit each one separately.



Figure 1. Example instruments used for collecting weed samples for diagnostic testing.



Figure 2. A moist paper towel should be included when packaging weed samples for shipment via overnight mail to ensure plants have adequate moisture during transit.



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