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Soil and Tissue Sampling Window Begins

By Allison Jonjak

It's that time again—when our dynamic, responsive cranberry plants are finally doing the same thing for an entire month. Throughout the growing season, cranberries are moving nutrients and carbohydrates throughout the plant—nutrients from roots to stems of leaves; carbohydrates from the production sites down to the roots—to fulfill the plant's growth, bud set, fruit set, and recovery needs. The period between mid-August and mid-September, when plants are focusing all their energy on filling fruit, is the only month-long period in the growing season that we can expect nutrient concentrations in the plant to be consistent from one week to the next.

So now is the time to take our tissue samples. This allows us to compare our results year-on-year to see long term trends in sufficiency or insufficiency of particular nutrients in our plant tissue. You know the drill (see source 2): walk a diagonal path across a bed, stopping to collect uprights from 10-12 sites. At each site, choose 5 fruiting and 5 non-fruiting uprights, and clip off only the current year's growth. Do not include fruit, but do include the stem growth that is new this year. After you have passed through the bed, you should have roughly 1 cup of tissue. Label the bag. Label the soil samples you collected as well (3) and send them off to the lab!

When the lab returns your results, enter them into your spreadsheet or record-keeping system so that you can see long term trends, along with this year's comparison with the lab-established optimal levels. If you'd like help creating a long-term comparison spreadsheet, reach out to Allison Jonjak, Extension Cranberry Outreach Specialist. Combining your tissue test levels with your first-hand observations, your recent and prior year fertilizer applications, soil test results, and the optimal levels, you can evaluate and improve upon your fertilizer application practices. This can save on input costs by reducing waste, let you avoid applications when soil concentration was not insufficient, and it can improve your yield and yield stability over time. We only get the opportunity to make year-on-year comparisons during this important time for our cranberry plants, so let's make the most of it!

Sources

[Cranberry Tissue Testing for Producing Beds in North America](#)

[How To Take a Cranberry Tissue Sample](#)

[How to Take a Cranberry Soil Sample](#)

Procedure:

Before you begin, gather the supplies and equipment for the job. You'll need a pair of scissors or pruning shears, a permanent marker, and a sufficient quantity of large envelopes or paper bags. Plan ahead of time where you'll take samples so you can walk your pattern on each bed collecting as you go.

1. Begin at the corner of the first bed. Walk into the bed 15-20 feet and collect the first sample. Grab a handful of uprights including both fruiting and non-fruiting uprights.



2. Cut off the uprights where current season growth begins. You may have some fruit attached. These should be removed later.



3. Pick off any fruit remaining on the uprights and place the uprights in a paper bag or envelope.



4. Walk another 30-50 feet and repeat the procedure. Do this until you have collected 10-12 sub-samples in a bed.
5. For each bed you should have collected about a cup of plant tissue.



6. Label the bag with the bed identification, date and farm name.



7. Allow the samples to air dry for a day or two before mailing to the lab. Don't wash the samples. Be sure to fill out the sample information sheet that the lab will provide for you.
8. Promptly mail the samples to the lab of your choice. Mail early in the week to prevent samples sitting in a post office over the weekend. Your County Agricultural Extension office can help you with this.

For more information about cranberry tissue testing please see "Cranberry Tissue Testing for Producing Beds in North America". This publication is available electronically at:
http://www.hort.wisc.edu/cran/mgt_articles/articles_nutr_mgt/Cranberry_tissue_sampling.pdf

A. **Sample at the right time.** The correct time to collect cranberry soil samples is when you take tissue samples--in the late summer; usually August 15 until September 15



B. **Sample to the correct depth.** The correct sampling depth for cranberry soil samples is six inches, excluding the duff layer.



C. **Take a representative sample.** A representative sample is collected by taking samples across an entire bed, not just in one place, one corner, or along one edge. Begin at one corner and collect 10-15 samples as you proceed to the opposite corner, or walk a zig zag pattern. At each location collect one sample core.



1. Begin at the corner of the first bed. Walk into the bed 15-20 feet and collect the first sample. Insert the probe to a depth of 6 inches and remove the probe.



2. Remove the duff layer, then empty the contents of the probe into a non-metallic bucket.



3. Walk another 30--50 feet and repeat the procedure. Do this until you have collected 10 to 15 cores across a bed. 10 cores is the minimum. As beds increase beyond 5 acres collect an additional sample core per acre.



PROCEDURE

Before you begin, gather the equipment and supplies you'll need.

- Soil probe with a mark at 6 inches*
 - Plastic bucket to hold samples
 - Paper or heavy plastic bags
 - Permanent marker
- * Soil probes are available in many agriculture and environmental services catalogs.

Weed of the Week

WEED OF THE WEEK

BIDENS CERNUA

Nodding Beggarticks & Sticktight



Photos from Weeds of the Cranberry Marsh.

life cycle / growth habit:
annual herb to 4 ft. tall



flower

root:
many thin, light-colored roots in a tuft from base



mature plant in cranberry bed

stem:
erect, branched above

leaf:
opposite, narrow, toothed

flower:
showy, yellow daisy-like heads, with broad, yellow rays and a darker yellow disk, often nodding; blooms August–October



young plant starting to flower

fruit/seed:
heads turning brownish and facing downward, contain numerous, flat, black stick-tights with 3–4 barbed pin-like projections at the tip, attaching to fur or clothing

habitat:
common plant of marshes, streambanks, ditches and wet meadows where open soil is available in summer and fall; often found around edges of cranberry beds

By Allison Jonjak, Jed Colquhoun, Teryl Roper, and Josh Sulman

Highlighting one popular (or unpopular) weed from the classic book [Weeds of the Cranberry Marsh: Jed Colquhoun, Teryl Roper, Josh Sulman. ©2009 by the Wisconsin Cranberry Board, Inc.](#)

This week we discuss three similar weeds: Nodding Beggarticks, Crowned Beggarticks, and Common Beggarticks.

[Download the full page infographic.](#)

Weed of the Week Con.

WEED OF THE WEEK

BIDENS CORONATA

Northern Swamp
Marigold & Crowned
Beggarticks

Photos from Weeds of the Cranberry Marsh.



life cycle / growth habit:
annual herb to 4 ft. tall



flower

root:
*tuft of branching roots
from base*



mature plant in
cranberry bed

stem:
narrow and wiry, branched

leaf:
*opposite, toothed, narrow
and often divided into long
lobes*

flower:
*numerous showy, yellow
heads with broad yellow
rays; blooms August–
October*

fruit/seed:
*on heads, facing up, seed
dark, 1/4 in. with small
barbed projections or none*

habitat:
*creek banks, marsh, sphagnum bogs, shores, moist
sandy sedge meadows*



mature plant

WEED OF THE WEEK

BIDENS FRONDOSA

Common
Beggarticks &
Devil's Beggarticks

Photos from Weeds of the Cranberry Marsh.



life cycle / growth habit:
annual herb to 4 ft. tall



flower

root:
fine, fibrous



young plants

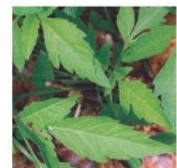
stem:
erect, branching, often tall

leaf:
*opposite, some divided into
3 leaflets, sharply toothed*

flower:
*heads dull yellow, with long,
green bracts beneath (approx. 8
bracts per head). Heads about
1/2 in. wide; blooms August–
October*

fruit/seed:
*heads hold numerous black
stick-tights*

habitat:
rich soil, marshes, banks, woods, moist sandy soil



leaf detail

Grower Updates

Flying Dollar Cranberry

By Seth Rice

Hello everybody! Now is the time we watch the fruit come up in size. Everybody has a different way to run their own fertilizer plan on their marsh but this year is pretty different for everybody. Most growers have pulled back on putting large amounts of nitrogen this year due to early rapid overgrowth. It's tough enough to get those berries on a normal year at the bottom to get decent color and good luck with that this year if you've got major overgrowth. Field days are this week! It's always fun to get together as growers and see new equipment and see different marshes. Before we send the kids back to school here in a few weeks, let's enjoy each others company and enjoy what we have left of summer. Some growers are seeing flea beetle feeding and other pests on the marsh. They can pop up really really quick so stay on top of watching for damage. Enjoy! Stay safe!

Vilas 51

By Jeremiah Mabie

Hello everyone as always I hope you are all well and enjoying summer. Things are going pretty darn well up north, we have been lucky with missing the big storms, getting just enough rain, and sneaking by with only a little frost watch!!! The berries sure seem to be enjoying the warm and humid weather as everyone's crops are looking very respectable across the board. Nitrogen applications have been all over the place as some sections and marshes are at expected levels for this yield potential, and other sections only have 15-20 units on them and they are still hot. Weather and soil conditions are to factor but definitely keeping us on our toes. Thankfully bug pressure has been on the minimal this year and hopefully it stays that way! We are all enjoying the little breath of air before the craziness of harvest starts to settle in, many marshes are already moving harvest equipment out, servicing, preparing and doing modifications as needed. Look forward to seeing everyone at the trade show this week!!!



*Sundance Berries at Vilas Cranberry, Aug 12.
Photo Jeremiah Mabie*

Update from the Wisconsin Cranberry Research Station

By Wade Brockman

Finally moving into the shop this week. Crop is sizing up nicely with plenty of warm days ahead. New plantings are done with fertilizer for the year and now just some working on getting grass to grow on the dikes!

