



Manual plant sap sampling

Cucumber



Contact details

NovaCropControl
Gasthuisstraat 20
5061 PB Oisterwijk
The Netherlands

www.novacropcontrol.nl

Joan Timmermans
Mobile: +316-83220623
E-mail: j.timmermans@novacropcontrol.nl

Koen van Kempen
Mobile: +316-57314128
E-mail: k.vankempen@novacropcontrol.nl



Sampling and sending samples

Location

Take the following steps into account when collecting leaf samples:

- Avoid the outer rows of the greenhouse. Also avoid the first and last 10 meters of a row.
- Sample leaves with an average leaf quality. Sample abnormal plants with e.g. deficiency symptoms separately. Might a deficiency be present in the young or old leaves of the total crop, then sample these leaves regularly as a young or old leaf sample.
- Take into account the sunny and shady side of the plant. Always consistently sample the same side.

Time of sampling

It is strongly recommended to take the samples before 9:00 AM. The plant will then have enough leaf-tension with proper moisture conditions.





Plant parts

For a young leaf sample, pick the **youngest, fully developed leaves**, about 50 – 100 cm. from the top of the plant (depending on the growing stage of the plant). Also pick (separately) the **oldest, but still vital leaves**. This is the 1st or 2nd vital leaf from the lowest part of the plant (see pictures 1-4). Stack the leaves for each sample and remove the petioles, as they will not give a good indication and influence the sample.



Young, fully developed leaf

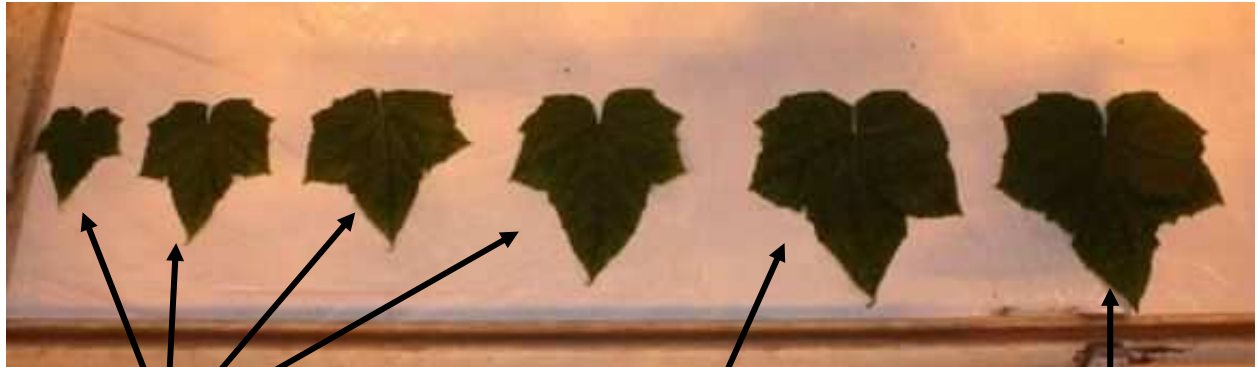
Old, vital leaf

Pic. 1





Pic. 2 Young leaves from the top of the plant



Too young, not fully developed

Fully developed leaf

Youngest, fully developed leaf

Pic. 3 Old leaves from the lower part of the plant



Too old, not vital leaf

Oldest, vital leaf





Pic. 4

Youngest, fully developed leaf

Oldest, vital leaf

Sample size

For an average, representative sample about 10 leaves are needed. Of course sample size can vary, depending on leaf type (size and thickness). Might you doubt about the sample size, please feel free to contact us.

Packing the leaf samples

Please pack the young and old leaf samples separately, these will be two different samples. To assure fluent processing please stack the leaves, fold the leaves if needed, and put them in a plastic zip-lock bag carefully. Make sure all air is out, so any leaf evaporation is excluded. See pictures below (tomato leaf as an example).





Fill in the labels correctly and place them on the bags (see pictures below). It is possible to order pre-printed labels. Contact us about the possibilities.





Sampling water

Make sure that the bottle is completely full. The analysis may be wrong if there are air bubbles in the bottle.



Right

Wrong

Wrong

Take a drip water sample at the dripler like in the picture below. A slap water sample can be taken by a syringe out of the substrate bag. Make sure you take the samples from several substrate bags, see the picture below. A drain water sample can be taken from the water return system.



The labels for a water sample need to be placed in such a way that the barcode is still readable.





Packing the samples

Put all samples in the envelope and make sure it fits in a mailbox (max 3,5 cm. high).



Sending the samples

The sample zip-lock bags with barcode can be sent in the envelope, in case you want to send more than one sample, please send them together in 1 box, so they will arrive together. Then put sufficient postage on the envelope or package. Always check the weight. Please take care that envelopes are sealed well. You can put an extra tape over the closure to avoid opening during transportation.

We recommend to sample crops on Friday and send the same day by DHL or FedEx, then NovaCropControl is receiving your samples in the beginning of the next week. Please put €1.00 as the shipment value on the sample package.

Please send samples to the address below:

NovaCropControl
Gasthuisstraat 20
5061 PB Oisterwijk
The Netherlands

