

Monitoring Insects Using a Sweep Net

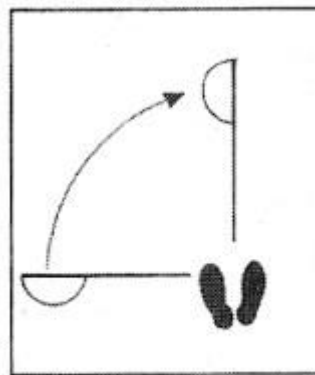


Although there are several techniques for determining the abundance of insects, for some insects, such as lygus bugs, cabbage seedpod weevil, some aphids, and beneficial insects, calculating the number of insects caught using a sweep net may be the preferred sampling technique. Some insects are very mobile or not easy to detect in the crop, and hard to monitor any other way. Economic thresholds for some insects are based on sampling using a sweep net.

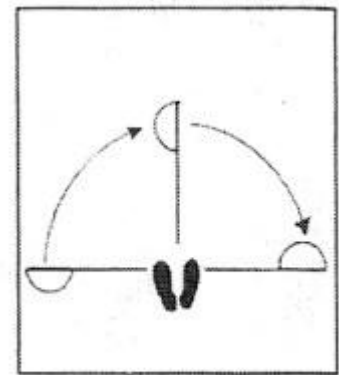
Technique for monitoring insects with a sweep net:

Catching and trapping the insects in the net

1. Determine the appropriate number of sweeps to take at each site. This is often 10, but may vary, depending on the insects being assessed. A sweep is made by swinging the net horizontally through the crop canopy so the top rim of the net is just above the top of the crop. If the crop is short, the sweeps will be closer to the ground. One sweep can be either a 90 or 180 degree pass through the crop, Take at least one complete step forward between each sweep so the sweeping activity does not influence the catch in your next sweep.

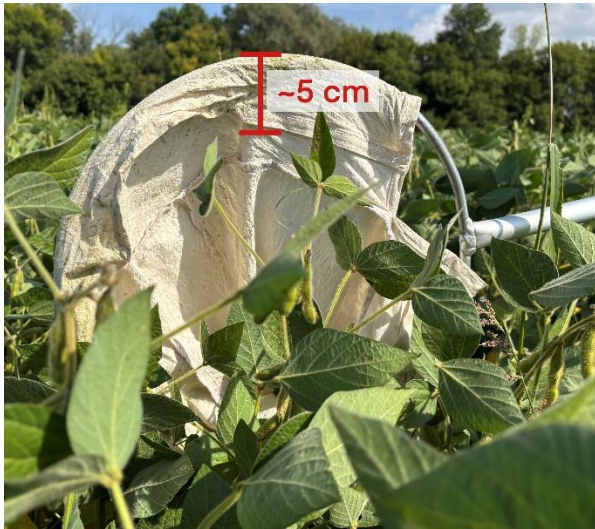


Typical 90° sweep.



180° sweep.

2. At the end of the last sweep, immediately swing the net quickly back and forth through the air well above the canopy to force the insects to the bottom of the net.
3. Quickly grab the bag about 15 to 20 cm from the bottom to confine the insects and prevent escape.



← Proper height of net going through crop

After the final sweep, swing the net above the crop to knock insects to bottom of the net. →



← Grab net bag to confine insects

Invert net through rim, then release insects →



Assessing your catch

After the insects have been confined to a small portion of the net bag, they can either be slowly released and counted, or transferred to a container or cage.

Slow release of insects from net: Insects can slowly be released and counted by inverting the net through the rim, while still holding the confined area of the net closed, then slowly open the portion of the net containing the insects. Insects can then be counted as they escape from the net.

Transfer insects to container or cage: Invert the portion of the net where the insects are trapped through the rim. Then empty the insects into a container, cage or sealable plastic bag.

The counting system you adopt will depend on how well and quickly you can identify the insects in your net, the number of species present and the total number of specimens. In situations where large numbers of insects make counting difficult in the field, consider placing the contents into a sealable bag or container, and seal and store for counting later. Successful counts of large numbers can be made by placing the insects in the freezer for 30 minutes to slow the insects down to allow for counting.

Considerations when monitoring insects with a sweep net:

Vegetation needs to be dry when using a sweep net in a crop, otherwise insects may stick to the wet bag and be difficult to count.

It is important to be able to move through the vegetation and pass the net through the canopy to get samples. For some crops, because of their size or the nature of the canopy, sweep net sampling may not be practical, and other insect sampling methods will need to be used.

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John Gavloski, Entomologist, Manitoba Agriculture.