



Bug**Vision**

Key Steps in Crop Inspection Scouting.

Besides Yellow sticky cards scouting, Plant inspection is always necessary to make sure that no issue (pest or disease) is missed. Let's look at what is involved in crop inspection and the different technics to make sure you are consistent.

1. Random VS Flagged plants

Random plants is maybe the best way to get an overall impression of your crop. As you don't focus on specific plants, you are **more likely to look at all the plants** while walking the greenhouse and localise any spot with an issue.

The drawback of random plant is that the scouting person is always **choosing the inspected plant unconsciously**. Selecting a different plant every time, **might affect the consistency** of the results and make comparison over time more difficult.

Using this method, I would advise to **average all the results from the concerned area** to make comparison overtime.

Flagged plants is a great solution when scouting is performed by new people in the facility. It is then **easy to give directions** and make sure nothing is skipped.

It is also a great way to have **consistent data overtime** because the same plant is scouted every time. You can compare plant to plant week after week and average the results if you want but you still have the single plants results.

The main drawback is that you focus on the flagged plants and you might miss issues just besides.

The best of both worlds : Half flagged plants and half random plants.

=> **BugVision App** allows you to track any configuration of scouting by organizing the data in a way to highlight any noticeable change but also compare to your historical data.

Scouting the Plant (aerial parts)

What pest on what part of the plant?

According to the plant you are growing, you have to focus on different pests which are feeding on different part of the plant.

But we can already provide a list of the pests which are difficult or impossible to track on sticky card:

WhiteFly

Aphids (only winged aphids appear on yellow cards usually too late)

Spider mites

For those pests, plant inspection is mandatory (yellow sticky card is not representative).

New shoots or meristems are preferred from the pest because plant tissue is softer.

=> Damage on older parts but no damage on new growth indicates that you have controlled the pest.

Flowers and buds produce pollen which attract some pests like Thrips for example.

Some pest hide underneath the leaves so it is important to flip the leaf to check underneath while do plant scouting.

Another avenue is what we call “**plant traps**”. They are species or cultivars which are highly sensitive to the pest you want to track. By scouting these specific plants, you have an early warning on the concerned pest population development.

Scouting Media and Roots

The roots are the most important plant health indicator and it is providing all the necessary nutrients for growth.

Watch for adequate watering because damp wet soil is usually vector of disease or pest development. Finding the right balance for watering is sometimes difficult especially during changing weather. If the watering is not consistent over the production area, it is always important to have a look at the plants in more wet areas to catch issues early.

Watch for any sign of mold

Watch for larvae presence

Watch for root hairs health and white growing tip. Brown root tips is not a sign of healthy plant.

Where to Pay Specific Attention

The greenhouse as a whole is supposed to be a consistent and optimized production environment to protect your crops from diseases and pests.

But as we know, issues always start around these areas where the production environment cannot be as wanted.

Example of these areas you need to know about and do more specific scout:

Vents.

Light difference.

Insulation/heat.

Anything that might be noticeable

And again, it is important to have a wide large look at the whole crop to try to catch anything like:

- colour difference
- curly leaves
- stage difference
- ...

Conclusion :

Scouting on plants is one of the most important tasks in the greenhouse. It allows the grower to monitor plant health and helps early diagnostic when issues happen. The earlier you can figure out an issue the less impact it will have on your production in term of production planning, quality and yield.

Be a multi parameter scouting person. Even if you are scouting for pests, you must look at the overall situation and assess plant watering, nutrition or environmental problem (temperature, light...). The scouting person should also be able to determine anything which can be wrong and impact the plant such as environment control system (motor tripped, uncalibrated sensor...).

Finally, I would say that it takes a lot of experience to feel a change or a difference from usual normal status. You would have to know and understand your crops but also all the tools your are using to grow them.

Comment or questions?

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