

Tobacco Thrips in Anthurium

Newsletter February 2022

Introduction

Spring is coming and temperatures will start to rise again. This has a direct effect on the development of Thrips. Therefore, now is the time to be on the lookout for Tobacco Thrips (*Thrips parvispinus*). When the first warm days come, a Tobacco Thrips population can explode, and with it the problems. It is important to act now.

In 2019, the first Tobacco Thrips were observed in the Netherlands. In 2020 for the first time in Anthurium and a large part of the acreage of pot Anthurium is now infected. The Thrips were also found on several farms when growing Anthurium cut flowers. Outside of Anthurium cultivation, the Tobacco Thrips also cause a lot of damage in, for example, green plant cultivation. In addition, it is known that Tobacco Thrips also cause a lot of damage in various crops in southern European countries. It is known that it occurs in bell peppers, but does not cause any problems.

In 2021 it turned out that the Tobacco Thrips can pose a serious threat to Anthurium crops. The Thrips cause considerable damage to the plants and are difficult to control. That is why it is important to be alert to signals of Tobacco Thrips so that early intervention can be taken. Many growers who encountered the Thrips in the autumn think they have the Thrips under control now because they count few numbers on the sticky traps and see (much) less crop damage. She probably went into hibernation on those farms, before hitting hard again in early spring.



Figure 1, leaf damage caused by Tobacco Thrips.

Behaviour

We got to know the Thrips as one that lives hidden at the bottom of the crop. In spring conditions it has a very short life cycle (< 15 days). The result of this is a high reproduction speed.

Signalling

The signalling of the Tobacco Thrips is done by a combination of methods. In the first place scouting the crop. Experience shows that crop damage (Figure 2) is the first signal of Tobacco Thrips. This can be recognized by yellow discoloration and corking of the leaf. The Tobacco Thrips also causes characteristic scraping damage to flower stems. In addition, Tobacco Thrips (in severe infestation) leads to considerable growth inhibition. This is visible, among other things, by a significant reduction in the flower stem length. The damage map shows the symptoms clearly. Share this poster with your staff and hang it in visible places. So that your staff can report suspicious damage symptoms.



Figure 2, damage in Anthurium caused by Tobacco Thrips

In the second place, Thrips can be detected on sticky traps with pheromone. Crop damage is the first and most important signal, as Tobacco Thrips are moderate on sticky traps, the experience has been so far. This is in contrast to Californian Thrips, which are quickly visible on the catch card. It is nevertheless advisable to install a system of sticky traps in the greenhouse and to monitor this on a weekly basis. In this way a picture can be formed of the developments in the Thrips population and the effect of interventions. In sensitive varieties, also hang sticky traps lower in the crop. The impression is that they can be found faster on these types of maps.

The Tobacco Thrips will only become clearly visible on the plant if there is a significant infestation. It mainly occurs in the flower buds and the leaf rolls. To a lesser extent, the Tobacco Thrips can be found on the unrolled leaf. In Figure 3 it can be seen that considerable damage is already present when the blade is unrolled. This indicates that Tobacco Thrips occur in the leaf rolls and cause damage.



Figure 3, growth of the leaf (in 7 days) L: day 1 R: damage visible after 7 days

Recognition

The female Tobacco Thrips can be recognized by the pointed black abdomen with a browner front body and head (Figure 4). The male is much smaller, has a yellower colour and can be recognized just like the female by its black wings. However, distinguishing a Tobacco Thrips from other Thrips species remains a challenge.



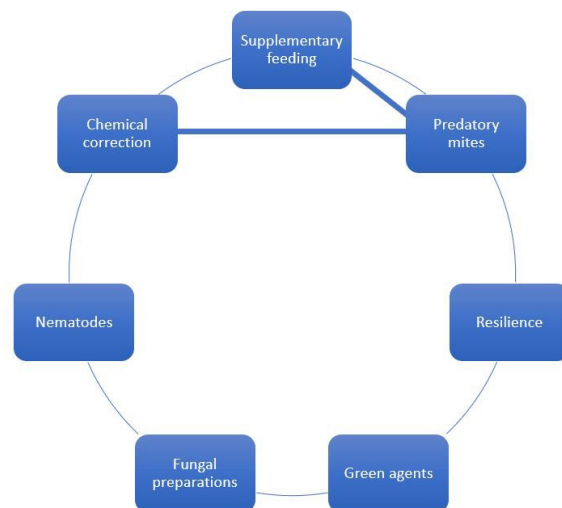
Figure 4, L: female Tobacco Thrips, R: male Tobacco Thrips

Approach

The approach to Tobacco Thrips requires a combination of methods and resources. At very low numbers, the biological approach can currently be applied. If the pressure is higher, a chemical approach is applied.

Biological approach

With a biological approach, the basis could be an overkill of predatory mites with *Montdorensis*, *Swirski* or *Cucumeris* in a supplementary feed system. Ground predatory mites such as *Hypoaspis* and *Macromite* are used to combat the pupae. *NeemAzal* can be used repeatedly as support. Fungal preparations (for example *BotaniGard* and *Mycotal*) and nematodes can also be an addition to the control. However, the effect of nematodes has been found to be considerably less than that of Californian Thrips. If the pressure of Tobacco Thrips gets too high, a chemical correction will be necessary. Use soft agents with a short after-effect time for this. By applying the Standing Army Principle, there is constant control of the Tobacco Thrips and the introduction of new Thrips can be suppressed. Contact your cultivation advisor and/or crop protection specialist for an optimal approach.



Standing Army Principle, biological control agents always present. Several combatants and methods are combined against the Tobacco Thrips.

Recently, a trial was conducted by Delphy using NeemAzal. This has shown that weekly treatment can significantly reduce Thrips damage (Figure 6). It is important to apply NeemAzal weekly so that it is present in the young plant parts. In addition, it is recommended to use a lot of water for good penetration into the crop. However, it is important to first carry out several test sprays to gain insight into whether crop damage can occur in certain varieties. In the past, NeemAzal damage has occurred in Anthurium.



Figure 6, pictures from the trial with NeemAzal in Anthurium. The treatment with NeemAzal is shown on the left. On the right the plants that have been sprayed with water weekly.

Chemical approach

With a chemical approach it is important to work with a short interval. It is recommended to use different application methods. Alternate spraying, LVM and/or fogging in cycles. Do not forget to apply the correct application technique. The moment of application, optimal equipment such as clean nozzles and the right spray pressure. Use an attractant and wetting agent for each pest. They have proven to contribute to an effective approach. With full crops it is important to spray with sufficient water, 1500 to 2000l/ha. Do a maximum of 3 treatments with one agent per chemical group to prevent resistance. Table 1 shows the effect of resources on the basis of practical experience. Contact your technical advisor for an optimal chemical approach.

Chemical agents	Good results	Reasonable results	Bad results	Results unclear
Conserve				
Vertimec				
Nocturn				
Sumicidin				
Decis				
Main Spring				
Winner				
Sivanto				
Requim Prime				

Current experience with the action of chemical agents against Tobacco Thrips in anthurium.

Alertness necessary

To control the Tobacco Thrips, alertness is necessary throughout the company. The basis is clean plant material. Treat sensitive varieties with a chemical cycle upon entry. After that, stay alert for

symptoms of Tobacco Thrips damage, both in the new plant material and in the rest of the greenhouse. Fortunately, we see more and more companies that have turned crop scouting into a serious act. Specialized staff/or external consultants who scout in more and more places very valuable work. Also ensure alertness among staff performing crop operations, possibly by using the damage symptoms poster.

There are clear differences between varieties in pot Anthurium. It has been found that varieties whose plants have a compact and bushy growth are more susceptible to Tobacco Thrips. It is important to place sensitive varieties together in the greenhouse. A specific approach for these varieties is then possible. It has been found that the Tobacco Thrips can become active after transport or crop handling with the plants. That is why it is important to adapt the control to the movements of plants. It has also become clear that the Tobacco Thrips returns in places where an infected batch of plants was located in the previous cultivation round. Intensive cleaning of a cultivation floor can prevent this. To prevent contamination of batches of plants, it is advisable to remove plants from the greenhouse in case of damage symptoms from Tobacco Thrips. These can be a source of contamination for the rest of the batch.

In Anthurium cut flowers there seems to be less difference between varieties in susceptibility to Tobacco Thrips. The Thrips have been found on many different varieties and spread throughout the greenhouse.

Closure

The pressure of Tobacco Thrips now seems to be not too bad for many companies. However, this can change very quickly in the spring and lead to serious infestations. It is therefore necessary to draw up a crop protection plan for Tobacco Thrips and to be alert to damage symptoms. Contact Delphy's advisors for guidance in the entire approach to Tobacco Thrips.

Martijn Voorwinden
Adviseur (snij) Anthurium
M +31(0)6 83 08 97 32
E m.voorwinden@delphy.nl

Aad van Holsteijn
Adviseur Kamerplanten
M +31 (0)6 53 42 72 09
E a.vanholsteijn@delphy.nl