

Buxus diseases (update January 2021)

Fungal infestations in Buxus now occur worldwide. The fungus began its advance in the early 1990s, first in the UK and later in Europe, followed by America and Canada in 2011.

There are two different fungi, namely *Calonectria pseudonaviculata* (old name *Cylindrocladium buxicola*) and *Volutella buxi*. Both fungi cause leaf and branch death. The attack usually starts with *Calonectria* (2 types) and can be followed by a secondary attack of *Volutella*. Both fungi have to be treated.

Below are detailed descriptions of these diseases.

- Description ***Calonectria pseudonaviculata* (*Cylindrocladium buxicola*)**
The infestation starts with black spots on the leaves. After a few days, the affected leaves fall off en masse and black stripes appear on the young twigs.



- Description ***Volutella buxi***
The infestation starts with brown discoloration of the leaves, which then wither and temporarily stick to the plant. Pale pink fungal spores appear on the underside of the leaves.



These diseases can be kept well under control if treated properly. Timely treatment can prevent much suffering. In large Buxus plantings, a preventive approach is preferable. However, if no treatment is implemented, the damage can be enormous. The damage usually starts with a few small spots, which grow into large infested areas in the second year. The greatest damage occurs in summer and autumn, especially in damp conditions and slightly higher temperatures. Extra caution is certainly called for, especially after heavy rainfall.

Affected plants can fully recover if properly treated.

Treatment:

- Several treatments are needed to keep the disease under control. A good rotation of fungicides used is necessary to avoid resistance. The limited number of approved products makes control difficult. Many products are also not available to the general public or in some member states.
- During dry periods, you can extend the deadlines somewhat as the disease pressure is lower then. During wet weather, extra vigilance is needed, even until the end of October. Normally, 3 treatments per year are sufficient if done at the right time.
- In gardens with a lot of Buxus or in infested gardens 4 to 5 treatments per year are recommended. It is important to stop the disease because at each new outbreak many fungal spores are formed which will make the cycle start all over again.

Following **professional schedule** for Belgium gives good results (2021)

time	product	active ingredient	dose/10 liter water	remark
May	Ortiva Top	azoxystrobin+difeconazool	10 ml	
June	Ortiva Top	azoxystrobin+difeconazool	10 ml	
July	Eminent	tetraconazool	7.5 ml	
August	Eminent	tetraconazool	7.5 ml	
September	Ortiva Top	azoxystrobin+difeconazool	10 ml	

- The following active substances also give good results: difenoconazole, tebuconazole, kresoxim-methyl, etc. Products based on copper, permitted in organic farming, have a moderate preventive effect.
- Phytosanitary legislation changes regularly in Europe. Not all products are authorised in every member state. Please always check the correct approval on eg. Fytoweb for Belgium.

Prevention:

By taking some appropriate measures, the disease pressure can be greatly reduced.

- Good hygiene is recommended but is no guarantee for keeping off the diseases. Avoid contact between infected and healthy plants. Disinfection of hedge trimmers is not very effective. It is better to treat with a good fungicide after pruning.
- In gardens with automatic irrigation, it is better, in dry periods, to water heavily once a week rather than daily. This will allow the plants to dry out better and will give the fungus less chance. The use of drip irrigation is also recommended.
- Judicious fertilisation can also prevent much distress. Plants that grow in a calm manner turn out to be less sensitive to infestation. The use of coated fertiliser is therefore preferable. Over-fertilisation should certainly be avoided.
- Also the way we use Buxus has a big influence on the occurrence of these diseases. Dense massifs, shaven shapes and clouds are much more susceptible to damage than naturally grown shrubs. In such a garden, some extra care is certainly advisable.
- Variety in the assortment can also prevent many problems. Avoiding sensitive species is certainly worth considering. Some Buxus species are less sensitive and can offer a good solution in many cases. From this year onwards, a new series of resistant Buxus varieties is available on the market: www.betterbuxus.com.

Conclusion:

It is a fact that we are increasingly confronted with long, wet periods in the growing months. These conditions are especially conducive to fungal attacks on plants. Buxus is equally affected. Due to the preconception that nothing could happen to Buxus, these fungal diseases were never or rarely dealt with. Due to the poor knowledge of these fungi, incorrect advice was often provided.

In my opinion, adequate monitoring and treatment are the only solution to keep this pest under control. At this time, the use of less sensitive cultivars is certainly recommended, especially if you do not wish to follow the treatment schedule.

In the long run, the resistant cultivars will offer the most durable solution. Our breeding programme, begun in 2007, has produced the first resistant hybrids that are distributed under the Betterbuxus® brand name.

Buxus remains one of the most rewarding plants for the garden and requires some extra maintenance like many other plants. Despite this extra maintenance, it cannot be replaced as an evergreen.

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www.herplant.be

www.buxusshop.be

www.buxuscare.com