

Plant Health Inspections During Active Growth

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INTRODUCTION

In 1980 the well established Danish plant health control system became compulsory. This was a result of cooperation between growers, growers organisations, and the plant protection service, now known as the Danish Plant Directorate. Since 1980 all firms producing plants for sale — even small producers — must be officially registered by the Danish Plant Directorate, and must have their plants inspected and approved for sale.

STATISTICS

Today about 1600 plant producing firms distributed as follows are under control:

- 944 firms producing glasshouse crops on an area of about 4 million m².
- 636 firms producing outdoor nursery stock on an area of about 2200 ha.

In addition, the control system comprises 42 firms producing flower bulbs, seed onions, and strawberry plants.

Plant health control covers all living plants intended for sale. The sale can be directly to other nurseries, to wholesalers, or to private persons. In practice the control system, therefore, covers plants to the final consumer as well as propagation material for the professional grower.

THE CONTROL CONCEPT

One of the basic philosophies in the Danish plant control concept is that sick plants cannot be made healthy by control. Although control is a good thing, control alone is not sufficient to ensure healthy plants.

Requiring intensive plant health controls in all nurseries — and having done this for many years — provides us with detailed information about the plant health situation, not only in the nursery in question, but also in the supplying nurseries. This information is used to solve present problems but perhaps more important to try to prevent future problems.

The earlier in a production chain you can solve a problem the better. More focus is, therefore, put on breeders and propagators. Why multiply 10 million cuttings and discover that all have a plant health problem, when this could have been solved when you only had five plants? The growers have realised this. Today it is more common that breeders have a strong interest in certification systems. The reason is obvious. It is a logical and systematic way of propagating healthy plants.

PLANT HEALTH REQUIREMENTS TO BE FULFILLED

Minimum Requirements (Compulsory). These requirements include those from EEC directives in combination with Danish requirements. The minimum requirements include both quarantined harmful organisms and some which the plants have to be “practically free from”.

Special Export Requirements (Voluntary). Freedom for some pests or diseases for a certain period or special requirements in relation to the growing medium.

Certification Requirements (Voluntary). To make the requirements in the Danish certification system known to both producers and buyers of certified material, requirements, to nuclear stockplants and certified plants as well as the companies performing this production, are written in the official order about plants.

EXECUTION OF THE PLANT HEALTH INSPECTIONS

The practical plant health inspections are done by inspectors located at district offices throughout Denmark. Each plant producing firm is inspected from 1 to 20 times a year. The number of inspections depends on many factors:

- Genera and species produced (different risks).
- Type of plant material (propagation material/plants for the final consumer).
- Production period of the year.
- The specific requirements to be fulfilled (destination of the plants).
- Results of previous inspections.

Glasshouse nurseries producing propagating material generally are inspected every 3 weeks. Within the European Union, Denmark is recognised as a protected zone for *Bemisia tabaci*. This means that the organism must not be established or spread. *Bemisia tabaci* must, therefore, not be found in either production nor trade. If it is found action will be taken.

We try to be flexible and always take the current results into consideration when planning the following inspections. About 4600 inspections are made each year. Furthermore, about 3000 samples of plants or sticky traps are examined for the possible presence of harmful organisms. These samples include also random sampling in the certification system.

Plant lots having pests or diseases where the tolerances are exceeded are put into quarantine or rejected. The plants being put into quarantine must stay in quarantine until the next inspection where they can be either approved or rejected. Plant lots which cannot be approved or put into quarantine must be destroyed.

On a yearly basis a few hundred thousand plants are destroyed after decision by the Danish Plant Directorate. The costs have to be born by the individual grower. Generally it is rare to find harmful organisms during the inspections. Pests like thrips, white flies, spider mites, and aphids are the most common.

After each inspection, the plant producer receives an inspection report. The inspection report lists which plants are to be destroyed or put into quarantine; all the other plants at the producer are approved and can be sold. If the plants fulfill special export requirements this will also be written on the inspection report. If the nursery produces plants in the certification system information about these plants will be given in a special certification report issued to the nursery.

All information about findings of pests and diseases in all Danish nurseries are collected in a computer system and are available for all inspectors at all district offices. This information can be used in case of future inspections in the nursery, in case of export, or in other control situations.

All plants must, before they leave the nursery, be labelled with either a plant passport, if this is required, or another label identifying the nursery (each nursery has its own registration number). This labelling system gives very good trace-back possibilities.

PAYMENT

All expenses in relation to the inspection system are paid by the individual grower. The payment is based on two elements:

- An annual basic fee for each company: 1438 dkr.
- A fee for each inspection of a certain area (1000 m² glasshouse or 1.5 ha outdoor land): 220 to 260 dkr.

For example, a very small firm with a 500 m² glasshouse, producing flowering plants in the spring (two inspections) pays in total about 2000 dkr per year. A larger firm with e.g., 20,000 m² glasshouses would have six inspections per year and must pay about 30,000 dkr. All costs for laboratory tests are included in the above mentioned fees. If products are going to be exported the company must pay 140 dkr for issuing of a phytosanitary certificate.

CONCLUSION

Many years of experience in the area of plant health has shown that:

- Registration of nurseries and inspection of all plants provides a good basis for fulfilling international obligations as well as the wishes of the horticultural industry.
- That it is better to solve a problem as early as possible in the production chain.
- Preventing problems is even better. Use of certified material is one way of obtaining this.
- Cooperation and agreement between growers, advisers, researchers, and the Danish Plant Directorate has made it easier to reach the goal of production and marketing of healthy plants.