

Plant Diseases Forum[®]

Panel Members: Ian Harvey and Donald McPherson

INTRODUCTION

All nursery production systems have a plant protection component. The consideration of management practices for plant disease is part of this. Diseased plants at the production or retail stage are undesirable and directly and indirectly cause loss of time, loss of sales, and usually add additional cost. Better management of disease is desirable and can be achieved through improved identification, diagnosis, and treatment of disease leading on to disease prevention involving all aspects of the propagation and production systems in the nursery.

The discussion was led by the panel and covered the following main points:

WHAT IS A PLANT DISEASE?

The answer would appear to be straightforward, however plant disease in the broadest sense includes any abnormality of plant growth or physiological disorder. The cause of plant disorders could be biotic, an infectious agent such as fungi, bacteria, or virus. Biotic disease involves the interaction of a pathogen with a plant and can be expressed as spots, blights, galls, wilts, and cankers. The cause could also be an abiotic or nonliving factor such as nutrient imbalance, extreme use of chemicals, wind or the sun. In many cases, plant disease can lie in the soil or media for long periods and only appear when conditions are correct.

IDENTIFICATION AND DIAGNOSIS

When abnormal plant growth is observed it is important to identify the cause rather than just applying a treatment. The ability to distinguish between pathogens and physiological disorders is an advantage. Identification of the cause can be achieved using a diagnostic service. If a pathogen is the problem then the service can specify what it is and possible treatment. Part of the identification and diagnosis process is asking and obtaining solutions to the right questions.

- Where did the problem come from and why do I have it?
- How important is the condition?
- Will it get worse (the prognosis) and does it need treatment?

Correct diagnosis can also provide information as to the longer-term management practices required for disease control and strategies that could prevent the future occurrence of the disease. A plant may appear diseased, but the cause may not be immediately obvious such as a stem canker or root rots caused by *Phytophthora* or *Pythium* species.

The introduction of new plants can also result in disease occurrence. The new plant species may respond to disease in the new environment in a different way. The new species may be exposed to an existing disease on the nursery that did not exist where it came from and to which it has no resistance. Another possibility is the new species may carry a pathogen that becomes a problem in the new environment, however was unimportant where it came from.

COMMON DISEASES IN NURSERY PRODUCTION

The discussion covered a full range of common symptoms; powdery and downy mildews, leaf spots, rusts, cankers, and galls. The most common pathogens causing disease in cultivated plants are fungi such as *Phytophthora* spp., *Pythium* spp., *Fusarium* spp., *Botrytis* spp., *Verticillium* spp., etc

PRACTICAL STEPS FOR PROPAGATORS

Observation is critical to all disease management. The ability to recognise symptoms of disease early is advantageous. Timeliness in observing disease symptoms can lead to a quick response to the disease and resulting in savings of time and money.

Recording the observed symptoms can be useful for the accurate identification of the disease. Recording the instance and identity of the disease can assist overall management practices for that disease. If the same symptoms are observed in the future, the records can tell you when they previously occurred and under what conditions.

Observation and recording in combination should create an effective monitoring system. An effective monitoring system creates greater overall plant protection and leads to improved disease management practice for each crop.

Whenever disease symptoms are observed and identified, attempt to locate the possible causes. Look at all factors such as propagating material, hygiene, cultural practices, and the growing environment.

Following the above four steps should lead to improved strategies for disease prevention. You can treat disease but prevention is a better strategy.

Pitfalls in Intellectual Property Agreements for Nurserymen and Growers[©]

Charlotte Henley

KPMG Legal, PO Box 10246, Wellington

INTRODUCTION

Often clients come to us asking for assistance in sorting out serious problems they have with another party that they have entered into a working relationship with, due mainly to the fact that an inappropriate or no written agreement at all has been entered into between the parties. I want to give you some basic pointers regarding the most important factors to consider and agree upon with the other party, prior to entering into a legal contract. These factors are particularly important in relation to arrangements regarding plant variety rights (PVR), trade marks, or other forms of intellectual property. This is very important, because if these arrangements go wrong, you could end up spending a lot of money sorting it out or end up losing control of your hard-earned intellectual property.

WHAT TYPES OF ARRANGEMENTS?

You may enter into a working relationship with another party, in which you want to licence them to market, propagate, trial, or bulk up your plant cultivar; to develop