TC point 11.5

Internet sales of plants for planting – an increasing trend and threat?[1]

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The sale of plants for planting on the Internet and by other direct marketing methods (e.g. newspaper offers) has increased dramatically in recent years. Some companies are specialist suppliers in this area and typically with this trade small quantities of plants are sent by mail to a very large number of amateur growers scattered throughout the UK. It is often difficult for the NPPO to keep track of this activity especially when the supplier is located outside its jurisdiction. Also if problems arise with plants sold in this way, taking effective official eradicatory action can be problematic. To demonstrate the issues and problems involved, two examples that occurred in the UK in 2008 are described.

Introduction

In the UK the purchasing of plants for planting from companies advertising on the Internet is becoming increasingly popular. Some companies are specialist Internet suppliers and also supply plants via advertisements in national magazines and newspapers. Some national newspapers have run special promotions for readers supplying plants free of charge or with a nominal delivery charge. Typically, with both Internet sales and national advertising campaigns small quantities of plants are sent by mail to many tens of thousands of amateur growers distributed throughout the UK. This situation is further complicated for an NPPO when the supplier is located outside its jurisdiction. For example, the UK market is supplied by several large Internet suppliers located in the Channel Islands of Guernsey and Jersey. These are Crown Dependencies and have their own independent administrations, legislative assemblies and plant health authorities.

In addition to the larger traders who have there are own websites, increasingly, smaller nurseries are advertising their products on E-commerce websites. This option provides a low cost outlet for businesses lacking the capital or facilities to sell their products on site. It also avoids the need to create any website or online purchasing system.

Another recent web-based phenomenon is the creation of plant sharing/trading websites. These facilitate the exchange or sale of plants between members of the public both within the same country and sometimes internationally. Given the complexity of plant health legislation, and the lack of guidance on such sites, it is likely that some prohibited movement of plants will occur inadvertently.

It is often difficult for the NPPO to keep track of Internet sales, especially when the plants are supplied by companies located outside its jurisdiction. Some of these companies are traders, rather than growers, buying in the plants and selling them on quickly, often in very large quantities. Some traders lack any real knowledge of plants, their pests and diseases and plant health regulations. Furthermore, in the event of a quarantine problem being identified with plants sold in this way, taking effective official eradicatory action can be problematic. To demonstrate the issues and problems involved, two examples of problems that occurred in the UK in 2008 are outlined below.

Example 1: illegal import of goji berry plants

This case involved the illegal import of goji berry plants (*Lycium barbarum* L.) originating from China. China is a major producer of goji fruit. Widely promoted as a 'superfruit' being rich in antioxidants and good for human health, goji fruit imports into Europe have increased dramatically in recent years. Given this level of interest, it is not surprising that amateur gardeners have been keen to purchase plants to produce their own fruit. *L. barbarum* is a deciduous, perennial shrub of temperate and subtropical regions. Being quite cold-hardy, plants can survive UK winters and so can be successfully grown out of doors. *L. barbarum* is however a member of the Solanaceae family, and the import of such plants from most third countries, including China, into the EU is prohibited. Although specific knowledge on goji berries is limited there is a potential threat to important solanaceous crops such as potatoes and tomatoes.

The illegal import of goji plants from China only came to light by chance when a Plant Health and Seeds Inspector (PHSI) was asked to inspect a small batch of goji plants at a UK nursery. The plants had been supplied by a company in Guernsey. They had been imported from China via the Netherlands. Subsequent investigations revealed the huge scale of the trade by the same supplier to customers throughout the UK. In 2007, 38 000 goji plants had been sent by mail to 8000 customers and by the time the illegal trade was discovered in 2008, 45 000 plants had already been supplied to 19 000 customers. Very few plants

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remained of the 2008 consignment in Guernsey or at the UK nursery and so less than 20 plants could be screened for pests and diseases. The common indigenous *Cucumber mosaic virus* was confirmed on one plant but more worryingly several members of the public reported finding galls on their plants. These were caused by the goji gall mite, *Aceria kuko* (Kishida), an Asian species never before recorded in Europe. Glasshouse studies undertaken at CSL showed that the mite readily transferred to pepper plants causing extensive leaf galling, foliar distortion and premature leaf abscission.

Fortunately no non-indigenous quarantine viruses or viroids have so far been detected on imported plants. This would have been a major concern because large numbers of plants will have been planted in people's gardens and on smallholdings. Inevitably, some will have been planted in close proximity to tomato and potato crops and even possibly close to commercial crops. The use of farm saved potato seed is a common practice by gardeners and so such crops could act as a reservoir of infection for spread by insects or mechanical transmission. Furthermore, goji is perennial, so infected plants could also continue to act as a direct source of infection for future potato and tomato crops.

Example 2: import of *Acer palmatum* infested with *Anoplophora chinensis*

The second case relates to the sale in the UK of *Acers* imported from China that were infested with *Anoplophora chinensis* (Forster) (the citrus longhorn beetle). This was not an illegal trade in itself, the problem was that the UK NPPO had no idea that the trade was taking place because the supplier was based in Guernsey and the trees were supplied directly to UK citizens by mail. Concern in the UK about the import of Chinese *Acers* is nothing new. The first major UK interception of *A. chinensis* occurred in 2005. On that occasion, 46 000 *Acer palmatum* Thunberg trees were destroyed at a nursery in Hampshire. Since that case, the UK NPPO has aimed to inspect all imported high risk consignments so as to ensure infested plants are not marketed or planted in the UK.

For this reason, there was great concern when the UK NPPO was informed by amateur growers that large beetles (later confirmed as *A. chinensis*) had emerged from *A. palmatum* trees supplied by a company in Guernsey. Further investigations in Guernsey by their plant quarantine service revealed that more than 130 000 *Acer* trees in 16 different consignments had been imported from China via the Netherlands. Of these 130 000 trees, more than 60 000 bare-rooted trees had already been mailed directly to private gardeners around the UK. These trees were marketed in the UK directly by the importer's website and mailshots, through offers in national and local newspapers and also via a television/Internet shopping channel. *A. chinensis* was confirmed in Guernsey in Chinese *Acer* trees that had not been despatched and these were destroyed. The level of infestation in the plants already distributed was not established. However, in 2008 there were 18 confirmed interceptions of the pest in the UK and 11 suspect cases where evidence of the pest was discovered (usually the presence of an exit hole in the stem). Of the 18 confirmed cases, 12 were confirmed as having a link to the 130 000 trees along with all 11 of the suspect cases. The Plant Health Authorities in Guernsey had not been aware of this trade until 2008. Other EPPO countries have experienced similar problems with *Anoplophora* infestation in imported *Acers*.

Both of the above cases presented the UK NPPO with a major problem. Over a 2-year period, more than 80 000 prohibited goji plants and more than 60 000 *Acers* potentially infested with *A. chinensis* have been supplied to a huge number of amateur growers widely distributed throughout the UK. Furthermore the vast majority of the plants had already been distributed and planted. This made the assessment of the threat posed and therefore the decision on proportionate and cost-effective pest management actions very difficult. The case of the goji plants was particularly problematic because less than 20 plants were available to examine and test for latent infection and the UK NPPO had no previous experience of similar imports from China. One option in both cases was for the NPPO to write to all recipients of the plants with recommendations for them to inspect and/or destroy the plants. Another would be for inspectors to undertake visits to help assess the level of infestation and the threat posed. In reality neither of these has been possible because the company involved was unwilling to provide the Plant Health authorities in Guernsey with a customer list. The company did however agree to write to all the recipients of the affected material but it is not clear to what extent this was done. The UK NPPO initiated a publicity campaign about the goji plants by using the NPPO website and responding on a national media gardening 'blog'. A goji plant from China shown being planted on national TV was also dug up and destroyed in a subsequent programme to publicise the problem. A national and regional publicity campaign was also carried out on the *Acer* issue, and will be repeated in 2009 given the long life cycle of the beetle. Despite these efforts, many tens of thousands of potentially infested *Acers* and goji plants will still be growing in gardens throughout the UK.

Conclusions

In both the above cases, the UK NPPO was unaware of the Internet trade largely because the plants are imported via another country and are mailed direct to customers by companies located outside its jurisdiction. This also precluded any opportunity to inspect consignments before distribution. It was therefore poorly prepared to deal with the problems when they arose. Clearly having a contingency plan would have helped, but in reality taking effective eradication measures will always be difficult in situations where plants for planting have already been distributed to a huge number of end-users widely distributed throughout a country. Given the legal issues involved with taking official measures in private gardens and the huge financial costs associated with visiting large numbers of widely distributed locations, encouraging customers to take voluntary action is often the only realistic course of action.

Internet sales of plants will undoubtedly continue to increase and it seems likely that trade will become increasingly inter-

national. What is worrying is that in both these cases problems were only discovered after huge numbers of plants had already been distributed to vast numbers of customers. There may be other problem cases that NPPOs are not aware of. To this end, increased routine monitoring of Internet sites has been instigated in an attempt to identify potential problems at an early stage when effective preventive action is still possible. Although some initial surveys of potentially infringing websites have been conducted at CSL (S. Bishop, pers. comm., 2008), effective monitoring of the Internet would be extremely labour intensive. For example, a search of UK plant sellers on eBay in 2008 produced more than 9000 returns. The United States Animal and Plant Health Inspection Service have developed the Agricultural Internet Monitoring System to automatically search for infringing websites. However, the cost of running such a system has been estimated at 75 000 USD per annum (S. Bishop and R. Tuppen, internal CSL report, 2004).

Commerce sur Internet de végétaux destinés à la plantation – une tendance et une menace croissante ?

Le commerce de végétaux destinés à la plantation sur Internet et par d'autres méthodes de marketing direct (par ex. offres dans les journaux) a considérablement augmenté ces dernières années. Certaines sociétés sont des fournisseurs spécialisés dans ce domaine et typiquement avec ce commerce, des petites quantités de végétaux sont envoyées par courrier à de très nombreux producteurs amateurs éparpillés dans tout le Royaume-Uni. Il est souvent difficile pour l'ONPV de suivre cette activité surtout quand le fournisseur est situé en dehors de sa juridiction. En outre, si des problèmes surviennent avec des végétaux vendus de cette manière, il peut s'avérer problématique de prendre des actions d'éradication officielles efficaces. Pour illustrer les problèmes en jeu, deux exemples qui se sont produits au Royaume-Uni en 2008 sont décrits.

Интернет-продажи посевного и посадочного материала, тенденция роста и угроза?

Продажи посевного и посадочного материала через Интернет и с помощью других методов прямого маркетинга (например, через объявления в газетах) в последние годы резко увеличились. Некоторые компании являются специализированными поставщиками в этой области, и, как правило, в этой торговле небольшие количества растений высылаются по почте большому числу садоводов-любителей, рассеянных по всей Великобритании. Для НОКЗР зачастую трудно проследить за этой деятельностью, поскольку поставщик находится за пределами ее юрисдикции. Кроме того, если проблемы возникают с растениями, проданными таким образом, предпринимать эффективное официальное действие по ликвидации может оказаться весьма проблематичным. Чтобы проиллюстрировать эти вопросы и связанные с ними проблемы, даны два примера, которые имели место в Великобритании в 2008 г.

