Report on a Community Plant Health Mission in Ireland:

Monitoring of the territory for the maintenance of the Protected Zone in respect of Erwinia amylovora (Burr.) Winsl. et al.

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1. **DETAILS ON THE MISSION**

1.1. **Participants**

Two inspectors of DG XXIV, FVO-3

1.2. **Visits and Meetings**

- Department of Agriculture and Food
  Discussions took place with the Chief Plant health Officer, two Senior Plant health officers and an Assistant Agricultural Inspector.

- State Laboratory, Abbotstown, Dublin 15
  Visit to the Phytopathology Department, discussion with responsible bacteriologist

- Nursery in County Kildare

- Nursery in County Kilkenny

2. **MISSION AIMS**

Commission Directive 98/17/CE extends the provisional recognition of Ireland as a protected zone with regard to *Erwinia amylovora* (Burr.) Winsl. et al., the causal agent of fire blight. This extension is further to a discussion in the Standing Committee on Plant Health on the basis of information provided by the Irish authorities and on the basis of survey monitoring information gathered by Commission experts. The provisional recognition of the protected zone expires on 31 December 1998. The aim of the mission was to verify on the spot if the requirements for a possible further extension of the protected zone statute are met. More specifically it had to be checked if the requirements of Commission Directive 92/70/EEC on the technical aspects of the systematic monitoring of the territory in question under the responsibility of the single and central authority are strictly respected.

3. **RESULTS**

3.1. **General background information**

According to the latest statistical data on the Irish nursery stock production - in the collection of which Plant Health Inspection Services played an important role - the sector is now consolidating its positions after a period of expansion. Although exports exceed imports, there is still a need for introduction of certain types of material such as liners and rootstocks for roses. Host plants of fire blight are introduced covered by a ZPb2 plant passport from buffer zones within other Member States, mainly from the Netherlands and the U.K. Most nurseries are rather small and produce a very large range of plants for afforestation as well as ornamentals and fruit trees. Container plants are relatively important.

Fire blight host plants still keep a very important position within production and trade. The most important fire blight host plants on the nurseries are *Cotoneaster* species, which are mainly used for public greenery and in private gardens. White hawthorn (*Crataegus monogyna*) is still an important feature in the landscape in rural areas.
Fire blight was discovered in Ireland in September 1986. Immediately a nation-wide survey was started which revealed the presence of the disease on different locations in Dublin and on two other places in the eastern part of the country. The survey and the eradication programme were very successful and reduced the extend of the disease in 1990-1992 to a few infested spots in the Dublin area, where the disease apparently maintains itself in a number of public parks. Outside the Dublin areas outbreaks are registered occasionally.

Legislation governing fire blight control has been the same from the very beginning and is based on the fire blight disease order of 1964.

3.2. Surveillance regime

All nurseries are registered according to the E.U. regulations. A file is kept at the PPS headquarters for each single registered nursery or garden centre. These files contain i.e. the application for registration by the producer concerned, plans with the positioning of the production sites, the reports of the inspections carried out and the sheets with data related to samples taken for analysis in the framework of monitoring for Fireblight.

Upon registration, growers receive information related to their obligations (such as record keeping, notification of suspected presence of certain harmful organisms, allowing official inspection and sampling…), together with instructions on the use of plant passports.

At the beginning of the growing season all inspectors receive updated instructions for the Fireblight survey. Sampling is focused on host plants showing suspect symptoms. Most samples are collected from mid-August until mid-October, basing on the fact that symptoms in general only develop in late summer and autumn. Over the last few years over 1350 samples per year were taken and analysed, originating both within and outside nurseries and garden centres. As for 1998, four out almost 500 samples analysed by the end of July tested positive, three of them originating in a public park in Dublin.

3.3. Sampling and laboratory analysis of host plant material

Only Plant Health Inspection personnel carry out sampling. All samples are tested at the State Laboratory in Abbotstown near Dublin. They arrive in plastic sacks and immediately receive a laboratory code number. Results are passed to the plant health inspection service only. The analysis starts with the maceration in distilled water of one to ten grams of plant material. After streaking on a semiselective SNA agar medium incubation takes 24-48 hours. Typical and suspect colonies are analysed further on and eventually used for the decisive inoculation test on immature pears. A slide agglutination is routinely used for suspect colonies. Biochemical tests have been abandoned, and nowadays PCR followed by gel-electrophoresis is carried out on about 150 samples a year. Test results show an excellent correlation with those obtained in the pear test, but the methodology has not been officially approved yet.

3.4. Verification of the correct implementation to the provisions of Article 1, paragraphs 2, 3 and 5 and of Art.2 of Commission directive 92/70/EEC, laying down detailed rules for surveys to be carried out for the purposes of the recognition of protected zones in the Community.
Article 1

par.2.a) An official action programme shall be established which aims to seek confirmation that one or more of the harmful organisms referred to in the said Directive, in respect of which the area in question is to be recognised as a protected zone are not endemic or established there;

Observation: Each year the responsible persons within the single and central authority establish a plan in which the guidelines for the survey to be carried out in the coming season are explained. This plan is subject to an annual evaluation and is modified if needed. ⇒ Compliance

par.2.b) The programme referred to in the point a) shall be monitored by persons entitled to act for the ‘responsible’ official bodies in a Member State, as referred to in the Directive.

Observation: The supervision of the programme and its implementation is entrusted to the head of the Plant Protection Service (Annex IV) ⇒ Compliance

par.3.a) The programme referred to in paragraph 2 a) shall comprise:

- a survey based on an understanding of the biology of the harmful organism(s) of concern and of the agronomy and environment of the relevant zone using appropriate methods of analysis including growing medium and crop inspection and, if necessary, laboratory testing,

Observations: the survey is carried out on all the host plants of Erwinia amylovora. It was noted that under the climatic conditions of Ireland broad-leaved Cotoneasters are the most vulnerable plants, maybe due to their late blossom period and their dominance in public parks, which encourages cross contamination. Possible infections are mainly found in August and September. These particularities are taken into account for the establishment of the instructions according to which the surveys are to be carried out. Also, basing on the experiences of the past, the density of sampling is much higher in areas where the disease has previously occurred than in other areas, though there too visual inspections on the premises and on nearby hedgerows are done and samples taken in the case of suspect symptoms. Over the last years at least 1350 samples per year have been analysed in the laboratory. Nurseries and garden centres in general are inspected once a year. Those producing or keeping Fireblight host plants at least twice a year or more often if there are reasons for suspicions. Possible reasons are the vicinity to places of an outbreak in the previous years or known trade relations with such places.

The methodology of the prospecting campaigns seems well reasoned, the laboratory is equipped to carry out the necessary analyses, and the density of visual inspections, samplings and analyses is sufficiently high. ⇒ Compliance

- a permanent regime providing regular and systematic surveys, at appropriate times, at least once a year, on the presence of the harmful organism(s) in respect of which the zone is to be recognised as a protected zone,

Observation: Here above the way the surveillance is carried out was quoted as in conformity with the requirements of the first indent of this same paragraph. The annual reports of the campaigns of the previous years and the list with preliminary results of 1998 give evidence of the continuity of the monitoring system ⇒ Compliance
- a system of keeping records of the results of the surveys,

*Observation:* When samples are taken a form is filled in with all the relevant data. This form accompanies the samples to the laboratory where the data are registered in a computerised database. Once the result of the analysis is known, this result is registered, and is filled in on the sampling form as well, which consecutively is sent to the plant protection service. These sampling forms are kept with the plant protection service. When applicable, the grower, the responsible for the plants or the public authority responsible for the public park receives a notice ordering the destruction of the infested plants. Destruction is either done by fire or by chipping and deep burial, but always in the presence of officers of the PPS.

⇒ **Compliance**

par.3.b) The surveys referred to in the point a) shall be carried out by persons entitled to act for the responsible official bodies responsible in a Member State, as referred to in the Directive; moreover, these persons shall have the power to have access to all relevant grounds and to draw samples of plants, plant products or growing medium there; they shall also have the qualifications necessary for the proper operation of the surveys.

*Observation:* Officers of the department of Agriculture and Food, Plant Protection Service carry out the surveys. They are entitled under the provisions of the Fire Blight Disease order of 1964, "to enter upon any land, any premises, vehicle, wagon etc. in or in the vicinity of which they have reasons to believe that fire blight disease exists or has existed on any tree or part of tree and they may make all such inquiries and examinations, including sampling, as they deem necessary". Throughout the country, in total 17 people working within the Plant Protection Service do the visual inspections and take care of sampling. For two of them, both working in the Dublin area, this is by far their most important task in late summer and autumn.

⇒ **Compliance**

par.3.c) The survey methodology, the conduct and the results of the surveys shall be accessible to the experts referred to in Article 19 (a) of the directive 77/93/EEC.

*Observation:* The instructions to the different inspectors on how to carry out the survey as well as the results of all the samples taken and analysed in 1997 and 1998 (taken and analysed before the date of the mission) were handed over upon request

⇒ **Compliance**

par.3.d) The survey methodology and conduct shall be notified to the Commission. The Commission shall forward this information to the other Member States.

*Observation:* Transmission of these data was done in view of the application for the initial recognition of the protected zone

⇒ **Compliance**

par.5. Any further measure which is appropriate to ensure that the conditions laid down in paragraph 2 are met may be taken.

*Observation:* No specific measure based on this paragraph has been brought forward

Art.2.: Member States shall bring into force the laws, regulations or administrative provisions necessary to comply with this Directive six months after the revision of the Annexes I to V to Directive 77/93/CEE at the latest. They shall forthwith inform the Commission thereof.
Observation: In exercise of the powers conferred to him by Section 3 of the European Communities Act, 1972 the Minister for Agriculture and Food is entitled to declare EU plant health regulations applicable in Ireland. Commission Directive 98/17/EC (as referred to under ‘Aims of the mission’) was declared applicable by Regulation S.I. No. 120 of 1998 dated 22 April 1998 ⇒ Compliance

4. CONCLUSIONS

- Since 1986 Ireland has implemented a permanent regime providing regular and systematic surveys, at the appropriate times and at least once a year, on the presence of Erwinia amylovora, the causal agent of fire blight. These surveys give evidence of a good understanding of the biology of the pathogen of concern and of the agronomy and environment of the relevant zone.

- Ireland is not completely free from fire blight. During the last years several thousands of samples were analysed in the laboratory and a certain number of infections were ascertained. These outbreaks are mainly confined to one or a few plants in some of the public parks in the Dublin area. To that add about 2 or 3 outbreaks per annum mostly in Counties in the Southeast of Ireland. These latter outbreaks are systematically eradicated in the year of their discovery and do not recur. Every few years an infection is detected on material introduced from outside Ireland.

- In early 1996 and again at the end of 1997 the provisional status of Ireland as a protected zone in respect of fire blight was extended for an additional period, which means that at that time it was agreed that:
  1) the disease was not endemic, and
  2) given the fact that the relevant organism is known to occur there, the official measures put in place have proven to be effective.
  The situation on the field has not changed noticeably since that date.

- When an outbreak is ascertained, the infected plants are destroyed rapidly and under good safety conditions. Extensive sampling is carried out to clearly demarcate the extent of the outbreak. The person responsible for the plants is notified in due time and receives sufficient information related to the measures that apply.

- As for nurseries, when outbreaks occur the infected plants are destroyed, and the other plants on the premises are extensively sampled and submitted to frequent visual inspections for the rest of the growing season. If no further evidence of the presence of the bacterium is found, these plants can be sold or moved at the end of the same year into other parts of the protected zone or into other protected zones in view of fire blight. Bearing in mind that most infections are only discovered in late summer or fall, the observation period to make sure that no further symptoms develop appears to be extremely short, thus creating a risks for of the disease spreading in its latent form.

- If the protected zone status cannot be maintained, import from material produced outside buffer zones in other Member States will be allowed entry into Ireland. Although such material can only come from registered nurseries in which no outbreaks of fire blight have been ascertained during official inspections, it certainly gives less assurance as regards freedom from this pathogen than material produced within other protected zones or within buffer zones. Increased risks for the disease spreading in Ireland leads to increased risks for Northern Ireland (U.K.) as there are no natural barriers between the
two territories. Also the obligations deriving from the protected zone status laid upon the Irish authorities provide for a legal basis for a strict control regime in respect of this harmful organism.

5. RECOMMENDATIONS

- To the Standing Committee on Plant Health:

- It seems justified to further extend the protected zone statute in respect of *Erwinia amylovora* in Ireland beyond 31 December 1998. However, as Ireland obviously is not completely free from the disease, and as the quarantine measures and restrictions applied to nurseries in the event of an outbreak need to be strengthened, a prolongation without expiry date of the Protected Zone status is not recommended. An extension until 31 March 2000 is therefore recommended.

- A strengthening of the Community legislation related to the handling of outbreaks within protected zones, might help the Irish competent authorities in their search for an stronger legal basis for quarantine measures to be imposed in the case of an outbreak. Such possible new Community legislation should be discussed in relation to the provisions put in place for the production of fire blight host plants in the buffer zones.

To the Irish competent authorities

- The search for a better legal basis allowing the Plant Health Inspection Service to impose quarantine measures on plants with a possible link to an outbreak and presenting a plant health risk must continue, with an aim to enable a sufficiently long observation period before such material can be moved

- In the annual survey work, priority should be given to a targeted inspection of nurseries and garden centres that have introduced fire blight host plants originating from buffer zones in other Member States where the disease is known to occur, or that received plants from nurseries in Ireland which were exposed to a health risk. Verification of registers related to incoming and outgoing plant passports will serve that purpose.

- Findings of the disease on material purchased from other Member States must be notified systematically to the Commission, and should not be dealt with in a bilateral way only.