EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION

04/11150
P IAS Point 3.2.2

Report of a Pest Risk Assessment

This summary presents the main features of a pest risk assessment which has been conducted on a pest, according to EPPO Standard PP 5/3(1) Pest Risk Assessment Scheme.

Pest:	***Solidago nemoralis***
PRA area:	Europe
Assessor:	Gritta Schrader & Richard Baker
Date:	5.4.2004 (based on a pest risk assessment conducted in October 2003)

OVERALL CONCLUSIONS	*Solidago nemoralis* is a potential weed of pastures, orchard and arable fields. It is very likely that the plant will be able to establish in unintended habitats in the PRA area, such as natural grasslands, disturbed areas, road and railway embankments as well as some agricultural and horticultural environments. The species is potentially invasive and is therefore not recommended for landscape planting in Europe. Native species or alien plants with no history of invasiveness in Europe should be substituted.

1. INITIATION

1.1 Reason for doing PRA:	The plant is intended to be imported into Germany and Switzerland for landscaping.
1.2. Taxonomic position of pest:	*Solidago nemoralis* Aiton *Asteraceae* Gray goldenrod

2. PROBABILITY OF INTRODUCTION

2.1 Entry

2.1.1 Geographical distribution:	North America**.** Occurs in all states of the USA east of the Rocky Mountains and in Eastern Canada.
2.1.2 Major habitats:	Grassland, prairies and steppe habitats on poor, sandy, neutral, coarse, aerobic soils (also on clay soils). Pastures, apple orchards, soybean fields.
2.1.3 Which pathway(s) is the pest likely to be introduced on:	Intentional introduction for landscaping.

2.2 Establishment

2.2.1 Habitats at risk in the PRA area:	Grasslands, prairie habitats with suitable soils. Pastures, orchards, arable fields.
2.2.2 Climatic similarity of present distribution with PRA area (or parts thereof):	Many similar climatic zones occur in Europe.
2.2.3 Aspects of the pest's biology that would favour establishment:	Sexual and asexual reproduction, high seed production, rapid growth, adaptability to environmental stress and marginal lands. Rapid spread by seed and rhizomes. Seeds can remain viable for about 4 years if buried in the soil. High seedling vigour. Being very competitive and rhizomatous, *S. nemoralis* can form monospecific stands. Its decumbent growth form may affect other species' growth.
2.2.4 Characteristics (other than climatic) of the PRA area that would favour establishment:	No specific natural enemies. In orchards and arable fields, although mowing and herbicide use may affect establishment, populations are likely to be maintained in hedges etc. Because the plant is advertised for landscaping purposes in Europe, large numbers of plants could be grown, which, coupled with the plant's high seed production and spread, increases the probability of establishment of the species in unintended habitats.
2.2.5 Which part of the PRA area is the endangered area:	Orchards, arable fields in central Europe. Disturbed ground. Further work is required to identify suitable European grassland habitats.

3. ECONOMIC IMPACT ASSESSMENT

3.1 Describe damage in PRA area:	Native species and crop plants outcompeted**.**
3.2 How much economic impact does the pest have in its present distribution:	A weed in pastures, apple orchards and soya bean fields in North America. Herbicides are recommended for use against this species in the USA.
3.3 How much economic impact would the pest have in the PRA area:	Economic: probably low to medium, although it may establish in arable fields and orchards, it will probably be easily controlled by current management practices. It may be more of a problem in pastures, particularly those with light management regimes, e.g. flower-rich meadows. Any small economic benefit of the introduction of this plant is likely to be outweighed by potential problems. Environmental: probably medium risk. Invasion of grasslands and loss of endangered species, e.g. orchids, provide the greatest risk. Social: low or no risk.

4. CONCLUSIONS OF PRA

4.1 Summarize the major factors that influence the acceptability of the risk from this pest:	*S. nemoralis* has been selected for landscaping because of its ability to colonize intended habitats rapidly. This is an unintentional introduction so it can be prevented.
4.2 Estimate the probability of entry:	Certain (Intentional introduction)
4.3 Estimate the probability of establishment:	Certain (Intentional introduction)
4.4 Estimate the potential economic impact:	Low to medium. Principal impacts are likely to be on pastures and uncultivated grasslands.
4.5 Degree of uncertainty	Further work is required to define the endangered area in Europe, principally by identifying uncultivated grasslands on suitable soils. Impacts will depend on the size of the area and the intensity of sowing/planting. More detailed information should be sought to determine the detailed distribution and extent of the damage caused by *S. nemoralis* in North America.