

ACTIVITIES FOR *Sirex noctilio* DETECTION IN CHILE

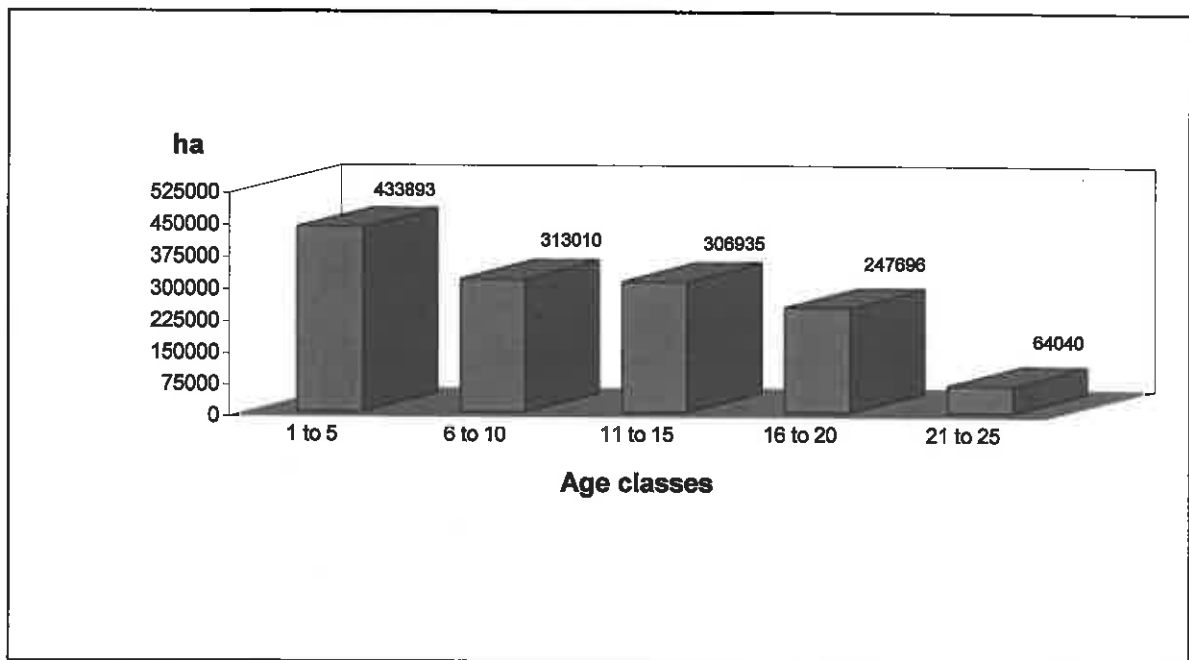
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Forest resources are very important to Chile, specially (D. Don) plantations which are the basis for the sustainable development of the Forestry Sector. This fact is demonstrated by the 1994's Chilean exports of forest products that amounted to US\$ 1.52 billion or 13% of all the country exports (INFOR, 1995).

This multi-million resource is under treat by the potential damage which would be caused by various forest pests, the most important of them *Sirex noctilio*, and A1 quarentenary pest in Chile. This insect has negatively impacted pine plantations in all countries where it established, with direct losses of tens of millions dollars and indirect losses that could be even larger than that (loss of market, control costs, etc.).

Pinus radiata plantations occupy 1,375,886 ha (INFOR, 1995) and are distributed from Region V to X, forming an almost continuous mass of forests. A large proportion of this forest area is in the most susceptible to wood wasp attack age classes, as shown in graph 1.

Graph 1 - Distribution of *Pinus radiata* area according to age classes in Chile (1994).



Due to the risk of *Sirex*, the SAG has established six years ago a cooperative program with the main forest companies of the country, which aims at detecting the

presence of the pest in national territory. In the 95-96 season, 200 groups of trap trees groups were installed in 6 regions of the country (V-X) and no *Sirex noctilio* was detected in any of the groups cut in September and October. The 96-97 season started in the last week of October and trap trees groups were installed during early November in a way similar to that of the previous season. Groups were installed according to risk areas which were defined with basis on the possible paths of introduction in the country.

1. NATURAL DISPERSION PATH

Due to the presence of the pest in Bariloche, Argentina, borders of Region X were considered a region with potential for natural dispersion of *Sirex*. Trap trees groups were installed with a frequency of 1 group for each 5000ha. In neighboring areas within a 50km distance to the Puesco border (IX Region), groups were installed with a density of 1 to 2500ha (due to the detection of *Ibalia leucospoides* in 94).

2. INCIDENTAL INTRODUCTION WAYS

2.1. Ports and International Barriers.

These are potential points of introduction of *Sirex noctilio*, considering woody containers as a focus dispersion vehicle. In zones limiting with ports and international barriers defined as potential areas of incidental introduction, trap trees groups were installed according to the bellow table:

Table 1. Density of trap trees groups (N/ha) according to risk level and distance of dispersion from port or barrier

Dispersion distance (km)			
Risk level	0-10	10-20	20-50
High	1/500	1/1000	1/5000
Medium	1/1000	1/5000	1/10000
Low	1/5000	1/10000	--

2.2. Areas of arrival or movement of imported goods with woody containers

This is the group where monitoring is more difficult, due to its random characteristics. In this group are all sites where the arrival of woody containers was

registered, specially those where container origin was from risky areas (areas where the pest occurs). Trap trees groups were installed in all places registered as important arrival centers of packaging wood, such as industrial plants under construction or in operation, non-port container yards, etc.

Table 2. Density of trap trees groups and distance of groups in areas of container arrival centers according to distance of dispersion

	Dispersion distance (km)	
	0-15km	15-30km
Density of groups	1/500ha	1/5000ha
Distance between groups	2.2km	7.0km

Groups of trap trees have a minimum of 5 trees and may have as much as 10 trees in some forest companies. Trap trees are 10-20cm breast height diameter, either intermediate or suppressed individuals and distributed along roads. Trees on borders of stands and forked trees are avoided.

Trap trees will be cut from August-October (end of 96-97 season) and information will be presented to Australian experts who will follow actions along the year.