## **Sprayer inspection in Portugal**

Moreira, J.F.<sup>1</sup>; Funenga, M.A.<sup>1</sup>; Martins, M.C.<sup>2</sup>; Nunes, P.<sup>2</sup>; Gonçalves, A.<sup>3</sup>; Aguiar, M.<sup>3</sup>; Baptista, V.<sup>3</sup>; Pacheco, F.<sup>4</sup>

- <sup>1</sup> Direcção-Geral de Agricultura e Desenvolvimento Rural;
- <sup>2</sup> Centro Operativo Tecnológico Hortofrutícola Nacional;
- <sup>3</sup> AMBI3Q, Lda

In spite of the non existence of recent statistical data concerning the pesticides application equipments (the last, respecting 2001, appointed about 56 000), according the most important Portuguese equipment manufacturers, roughly half of them are sprayers for field and horticulture crops and the other half for perennial crops (vineyards and orchards).

For the last ones, the air assistance hydraulic are very common, but vertical booms (lower height) and hand held application, owing the difficult of the access at some regions, are also used.

In 2001 the proposal of the Portuguese legislation previewed the compulsory training of the operators to be able to apply pesticides. These legislation was only approved in 2005. (Decreto-Lei 173/2005). In consequence several training application courses were developed, initially by Official Service of the Agriculture Ministry, in which the scale and the accuracy of the pressure gauge (making possible to read lesser pressures) and the eventual difference from the theoretically nozzle output and the real output, measured in the field, were some of the aspects more enhanced.

Based on the Directive 2001/45/EC of the European Parliament and of the Council, concerning the minimum safety and heath requirements for the use of the work equipment by workers, to ensure the health and safety, the national manufacturer TOMIX began to test the accuracy of its sprayers in use, by requirement of their farmer customers. The pump capacity to ensure a stable and reliable application rate, the acceptable maintenance of the spray liquid tank, of the pipes and hoses and the airflow created by the fan, were some of the details checked at more than 300 sprayers (near by 70 % orchards sprayers) during 2004 and 2005.

However, the voluntary sprayer inspection service, enlarged to all constructers, began in Portugal in 2006 \*, by COTHN (Centro Operativo Tecnológico Hortofrutícola Nacional), with technical support from official Service DGADR (Direcção-Geral de Agricultura e Desenvolvimento Rural).

In the beginning the inspection were almost made at the orchards sprayers. Actually, COTHN has a mobile inspection process for orchards spray equipment and, also, horticulture crops, in different regions of the country. The inspections are being done according to the exigencies of the market.

Although the inspection of the typical tank-pump-lance sprayers is not established, owing the farmers (mainly greenhouses growers) request, at 2007 and 2008, several inspection of that sprayers were done by the referred COTHN and a by a new private association, the AMBI3Q, operating in the northern country, that began the inspections also with the official technical support granted by the DGADR. Recently, at the southern country, another private corporation, A.CANO, is organized to get going to inspect, mainly, sprayer booms for the cereals.

At the moment the inspections of the all mentioned enterprises are made by mobile process and specific workshops for sprayer inspection are inexistent.

Due to the requests of the Directive of the Parliament and of the Council establishing a framework for Community action to achieve the sustainable use of pesticides, a proposal of the national law about the plant protection equipment is in the process of governmental authority submission.

\* Martins M.C., Moreira J.F. (2007): The first year of the sprayer inspection in Portugal. Abst. Standardized Procedure for the Inspection of Spraers in Europe. Straelen (Alemanha), p. 77.

<sup>&</sup>lt;sup>4</sup> A.CANO Associados, S.A.