TRAINING ON ANTAM STANDARD CODE
For TESTING OF KNAPSACK MISTERS CUM DUSTERS

PART -1 : ENTAM Testing and mutual recognition process

16 - 28 October2016, Nanjing China

2nd Training of Trainers on ANTAM Codes
Organized by ANTAM and CAMTC
ENTAM : Testing and mutual recognition process

JP Douzals
ENTAM structure and process

**Studies and Researches**: improve the performance of Agricultural Machinery and sharing best practices

**Innovation**: development of best technologies

**Standardization**: common testing activity and mutual recognition of the tests on the basis of common testing procedures or methodologies

**Certification**: in accordance with OECD codes

ENTAM is currently made up of 11 members, 1 honorary witness (FAO) and 4 observer members (INTA, AFMSPTC CEA, VIM) respectively from Argentina, Bulgaria, Brazil and Russia
**HOW ENTAM WORKS**

**First level:**
- Machine testing
- Test report
- Entam registration

**Testing activity:**
Entam bodies test machines based on common methodology

1) ENTAM bodies test the machines following the network's common methodology (approved by ENTAM's Technical Working Group)
2) At the end of testing activities ENTAM issues a test report (in English) and the machine becomes "ENTAM Registered".

**ENTAM TWG**
Thechnical Working Group
HOW ENTAM WORKS
Second level:

Entam
Registered Test Report

Entam Recognized Test Report

A Team of Competence (ToC)
is responsible for test recognition activities
Sprayer type: Trained Field Crop Sprayer
Trade mark: CAFFINI
Model: Prestige 2800/24

Manufacturer: Caffini spa
Via Marconi, 2
I - 37050 Palù (VR)

Test report: 05/157
October 2009
Description of implement

The implement is a trailed sprayer for use on herbaceous crops. The sprayer is attached to the tractor through the towing hook (steering drawbar optional).

The axle is fitted by hydraulic suspension.

The frame of the machine is made of painted steel, the main and auxiliary tanks are made of polyethylene. A gauge is located on the front left of the main tank. The liquid level is indicated by a transparent external tube with float. Agitation is through hydraulic stirrers located on the bottom of the tank. The tank is completely emptied using a valve located on the left side. Access to the main tank is through an ad hoc raised platform situated on the left side. The implement has a range of models, having a main tank nominal capacity of 2200, 2800 and 3300 l.

The implement is powered through the tractor PTO having a rated speed of 540 rpm.

The implement has a diaphragm pump located in front of the main tank. Pressure regulation and liquid dispensing are controlled using electrically operated controls that can be placed in the tractor cab.

There are 2 filters: one suction filter, which can be inspected even if the main tank is full, and one pressure filter.

The boom, having a working width of 18, 21, 24, 27 and 28 m, is made out of painted steel. During transport it is folded on the side of the tank using ad hoc supports used to block the implement. The boom optionally can be fitted with air assistance. The air flow is obtained by a 800 mm axial fan hydraulically driven.

The boom is attached to the support frame through a parallelogram connection, while the boom support is a collapsible trapezoidal joint. Adjusting of the boom position and opening-closing operations are electro-hydraulically operated through a control panel that can be positioned close to the driver's seat or using directly the tractor's hydraulic distributors. The blocking of boom oscillation is automatic when the boom is being closed.

Liquid is sprayed under pressure. The nozzle holders are equipped with a diaphragm antipirip device.

The valves for managing the hydraulic circuit (spraying/cleaning) are located in the front left side.

The pressure gauge for checking operating pressure is positioned on the front of the main tank. It has a diameter of 100 mm, end scale of 25 bar and is in intervals of 0.1 bar.

An induction hopper is installed on the left side of the machine for the pre-mixing of chemical products.
Testing of Safety

The machine is endowed with CE marking, an identification plate, safety pictograms, an instruction handbook and an EC manufacturer's declaration of conformity. The implement meets the requirements of Enama safety regulations cat. 05.05 – Crop protection machines: Trailing boom sprayers - rev. 2.4 of 1/04/2008, containing the following harmonised standards and technical specifications: UNI EN 907: 1998, UNI EN 1553: 2001, ISO 11684: 1995. The relative documentation has been filed.

Explanation on testing

Testing takes place according to the Technical Instructions for ENTAM-Tests of Field Crop Sprayers (Ref 3). This procedure was developed by the competent testing authorities of the European countries participating in ENTAM and is based on the CEN standard EN 12761 “Agricultural and forestry machinery – Plant protection equipment for the application of plant protection products and liquid fertilizers”. This test is only a technical performance test which takes place without an accompanying field test.

The test results apply only to the tested appurtenances of the sprayer. Statements on the behaviour of the sprayer with different appurtenances cannot be derived from this results.
### Responsibility and recognition

**Performing competent authority:**

Crop Protection Technology DEIAFA - meccanica  
Via L. da Vinci, 44  
I -10095 Grugliasco (TO)

This test is recognized by the ENTAM members:

<table>
<thead>
<tr>
<th>Country</th>
<th>Organisation</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>ART - Agroscope Reckenholz-Taenikon Research Station - SWITZERLAND</td>
<td>I-43.09</td>
</tr>
<tr>
<td>Denmark</td>
<td>AU/DAE - University of Aarhus - Department of Agricultural Engineering - DENMARK</td>
<td>AU DAE ENTAM 2009-13</td>
</tr>
<tr>
<td>France</td>
<td>Cemagref - Institut de recherche pour l'ingénierie de l'agriculture et de l'environnement – FRANCE</td>
<td>CEMAGREF/ENTAM/09/025</td>
</tr>
<tr>
<td>Spain</td>
<td>CMA - Centre de Mecanització Agrària - SPAIN</td>
<td>EPH005/09</td>
</tr>
<tr>
<td>Austria</td>
<td>HBLFA Francisco Josephinum Wieselburg - BIOMASS</td>
<td>LOGISTICS</td>
</tr>
<tr>
<td>Germany</td>
<td>JKI - Julius Kühn-Institut (formerly BBA) - GERMANY</td>
<td>ENT-J-07/09</td>
</tr>
<tr>
<td>Hungary</td>
<td>MGI - MEZOGAZDASÁGI GÉPESÍTÉSI INTÉZET Hungarian Institute of Agricultural Engineering - HUNGARY</td>
<td>I-23 2009</td>
</tr>
<tr>
<td>Greece</td>
<td>N.AG.REF. - National Agricultural Research Foundation - GREECE</td>
<td>AE/122/01/ZZ</td>
</tr>
<tr>
<td>Poland</td>
<td>PIMR - Przemysłowy Instytut Maszyn Rolniczych - Industrial Institute of Agricultural Engineering - POLAND</td>
<td>PIMR-31/ENTAM/09</td>
</tr>
</tbody>
</table>