

**MD.2.**

<b>Title</b>	<b>AgroBot: Robotic system for crop maintenance</b>
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<b>Patent no.</b>	Project No. 20.80009.5007.26
<b>Description</b>	This elaboration is part of the field of Intelligent

INTERNATIONAL EXHIBITS

## EUROINVENT 2022 ONLINE

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Agriculture, in particular it is intended for the development of autonomous plant protection and care systems. The system is developed on the basis of a Jetson Nano Single-Board Computer, which implements an algorithm for acquiring and processing video images in real time, as a result of which the plants affected by pests are identified. Neural network models are used for image processing, which ensures a learning ability in the process of functioning. Plants identified as being affected by pests are individually processed by spraying protective chemicals. Image processing is performed by applying a series of filters made using the OPEN CV library.

The AgroBot system (Figure 1) shows a mobile platform (MP) on four wheels (W) that moves on the surface of the land subject to maintenance being driven by MX engines. The spray system (SS) is driven by the Delta Arm (DA) which, by translational movement, is positioned just above the plant to apply the protective chemicals.

The application of the AgroBot system in the maintenance process of agricultural crops will reduce costs by the efficient use of chemicals and reduce their negative influence on the quality of agricultural products.