FONDAZIONE BRUNO KESSLER
MAGAZINE

Artificial intelligence for a smart harvest

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Fondazione Bruno Kessler helps Cavit and Trentino based farmers with an artificial intelligence predictive system that indicates the optimal ripening degree of the grape bunch

The harvest season will also start in Trentino in a few weeks and this year the technology developed by Fondazione Bruno Kessler will make an important contribution to the operators involved in the rows.
The **Fruitipy** project – an idea that was born in the summer of 2016 as part of the WebValley School – after a period of "field tests", is ready to support Cavit's agronomists and wine experts with the analysis and harvesting operations.

Fruitipy is a **predictive system based on artificial intelligence** that can, thanks to the use of special portable spectrometers, perform onsite analysis processes that are normally carried out in laboratories, **measuring both the level of sugars and the presence of acid components in real time** by simply aiming the sensors on the bunches. In this way, therefore, it is possible to d**etermine with higher precision the optimal harvest time for each vineyard, speeding up and multiplying the analysis processes** with methods that are absolutely non-invasive compared to traditional procedures, which involve cutting samples from the vines and sending them to the laboratory.

The system developed by the FBK researchers also allows, with the aid of a dedicated smartphone app that takes photos and make videos of the vineyards, to **determine with the highest level of precision the quantity of grapes in each plant**, thus estimating the harvest volumes of each area.

Fruitipy is just one of the projects launched by Fondazione Bruno Kessler in the field of agriculture, and shows how today the **use of big data and artificial intelligence** – to support the work of humans, which remains central in every process – can be introduced in **agricultural production processes with the aim of reducing costs, increasing economic results and above all ensuring competitive quality standards.**

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