

## RESULT 2: OPEN PLATFORM FOR SHARING KNOWLEDGE

### WP 1: Learning Environment for SMEs

## CASE STUDIES DEVELOPMENT

### APPLICATION OF DRONES (CROP SPRAYING) IN HORTICULTURAL AND CEREALS

#### Part 1: General information for the enterprise

1. Restemis Loukas
2. Amfikleia, Greece
3. Farmer
4. Individual
5. Management
  - a. Gender: Male / Female / Other
  - b. Age: up to 35 / 36-45 / 46-55 / 56-65 / over 65
  - c. Education: primary / secondary / higher
6. Farm size
  - a. cultivated land 90 ha, of which 30 ha arable land; potatoes, clovers, wheat, rye,

#### Part 2: Smart technologies used on the farm

- *Crop spraying via drones in horticultural and cereals*

#### Part 3: Owners' satisfaction with the use of smart technologies

1. Utility assessment

*Loukas Restemis runs a family farm in Amfikleia, which is located in the Prefecture of Fthiotida and is considered a semi-mountainous area. The main activity of the family business is the cultivation of cereals and horticulture. The company also has a packaging plant mainly for peeled potatoes. For the last five years, Loukas has owned drones for spraying crops. In more detail, precision spraying is applied with the help of drones to horticulture and cereals, while for trees under hail protection, a tractor with an attached sprayer is used where the spraying is carried out via satellite.*

*Loukas declares that he is quite satisfied with the application of smart agriculture, as from the moment the drone is amortized it is the most economical method mainly due to the reduction of fuel and also the time savings. Also, the most uniform spraying can be added to its positive characteristics due to the ventilation it causes in the plants.*

## 2. Observed difficulties and problems

*The technical company from which they procured the equipment took care of their training in the proper handling of the drones and is immediately available for any questions or problems that may arise*

*The main problems encountered so far are summarized as follows:*

- *There is still no formulation for drones on the market, so the conventional formulation is used for several liter ton sprayers.*
- *It is a common phenomenon that there is no good communication with the satellite as a result of which the sprays do not take place and there are time delays.*
- *In the area of Amfikleia there is a problem with the overhead wiring of the electricity as the drones get tangled in the cables.*

## 3. Potential risks

*There is this concern mainly since the cost of purchasing the equipment was already high. Nevertheless, Loukas is so far quite satisfied with the cooperation with the technical company.*

*Another concern of Loukas is that one must be skilled enough to avoid injury.*

## Part 4: Financing the investment in smart technologies

*The purchase of the drones came from personal capital. Lukas even underlines that the cost is quite high. He also states that the European Union should take care of more subsidies.*

## Part 5: Future intentions towards smart technologies

*Loukas is of the opinion that all the new generation products serve and save. This is not just a belief as in practice it has been seen through their application that productivity has increased while wastage has significantly decreased. Also, the quality of his work has improved. In conclusion, he remains open to the use of new technologies and the continuous renewal of his equipment.*

## Part 6: Some photos



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