

DEVELOPMENT OF A TRAINING PROGRAM FOR ENHANCING THE USE OF ICT TOOLS IN THE IMPLEMENTATION OF PRECISION AGRICULTURE

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Training Package 4

Evaluation of the students' outcome of the Training Package

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Please, answer the following questions.

1. Introduction: In this training package we consider an ICT device to be ...
 - a. Software
 - b. Hardware
 - c. Both software and hardware

2. Introduction: It is a main characteristic for ICT devices for Precision Agriculture (compared to Smart Farming) that they ...
 - a. Optimize farm production on an overall scale, e.g. on farm scale
 - b. Use knowledge about variability to treat more individually
 - c. Make use of data to improve the financial profit of the production

3. Introduction: It is a main characteristic for ICT devices for Smart Farming (compared to Precision Agriculture) that they...
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4. VRA fertilization: It may not be relevant to do variable rate fertilization if...
 - a. A relatively high fertilization dosage is required
 - b. The variation in biomass is large in the field
 - c. The variation in biomass is small in the field

5. VRA fertilization: When nitrogen fertilizer is redistributed in a field, it is best to...
 - a. Give more fertilizer to spots with weak crop growth in order to strengthen the crop and make it more homogeneous

- b. Give more fertilizer to spots with strong crop growth in order to unleash the growth potential of the crop
 - c. Give more fertilizer to both spots with weak and strong crop growth and less fertilizer to spots with average crop growth in order to increase the total crop yield
6. CTF: The main aim with Controlled Traffic Farming is...
 - a. To track patterns of field traffic to calculate efficiency of the machines
 - b. To reduce tracked area in fields to the least possible proportion of the total area
 - c. To vary driving patterns in field to ensure that any compaction damage is evenly distributed
7. CTF: The main benefit from Controlled Traffic Farming is...
 - a. Reduction of soil compaction
 - b. Reduction of fuel consumption due to random driving
 - c. Reduction of crop damage from the heavy machines
8. VRA in vineyards: By varying the volume rate applied in each vigour zone in the field depending on canopy characteristics...
 - a. Product deposition in leaves will be potentially improved, as well as product penetration because flow rate is adjusted to the density of vegetation
 - b. There exists the risk of leaching product in leaves of low vigour areas
 - c. Drift will increase due to the changes of volume rate
9. VRA in vineyards: One of the potential risks that might be encountered when working with canopy maps containing too many vigour classes is...
 - a. The controller is not able to read the different areas of the map fast enough
 - b. The machine will be switching volume rate too often and will not maintain regular working conditions, which will affect the quality of deposition
 - c. The working speed will be slower to allow real time positioning of the machine
10. Selective harvest of grapes: Vineyard selective harvesting should be...



- a. A must for every farmer in order to increase value of their grapes regardless of the structure of spatial variability and type of harvest
 - b. Carefully planned to make sure that the structure of spatial variability allows for an easy and economically profitable harvest management
 - c. Always done in big fields
11. Selective harvest of grapes: When using remote sensing for field zonification with the purpose of performing selective harvesting...
- a. All harvesters are ready to understand the maps and act according to its information
 - b. The maps produced can be directly used for harvesting, where high vigour means low grape quality and low vigour is related with the highest quality in the vineyard
 - c. One must bear in mind that remote sensing perceives leaf reflectance, which may not be directly correlated with fruit quality characteristics, and field samples will be needed.



Correct answers:

1.c, 2.b, 3.a, 4.c, 5.b, 6.b, 7.a, 8.a, 9.b, 10.b, 11.c.