Sm@RT
Sm@ll Ruminant Technologies

3D Imaging

Need: Automatic estimation of Body Condition Score (BCS)

Aim:
- Monitoring of animals' condition
- More regular and objective data

Description: A tool with 6 3D cameras can take a photo of the shape of part of the animal or the whole animal. The prototype is currently in the research phase, and algorithms are being created to estimate the weight and NEC of ewes. Other systems exist in other sectors.

How to Implement: The prototype is installed in a restraint corridor. The flow is managed by two gates, one at the entrance and one at the exit. The animal is identified as it passes through and an image is taken (automatically or by the operator). Images are taken quickly (a few tenths of a second). The images are then sorted automatically and an algorithm estimates the weight of the ewes. The estimation of Body Condition Score using 3D imagery is not yet robust and reliable.

Expected Benefits:
- Better animal monitoring
- Less stress for the animals and the farmer

Country:

France

Production System (dairy or/and meat sheep/goat):

Meat sheep

Category of Animal (ewe, goat, replacement, lamb, kid):

Ewes

Source of Information:

https://idele.fr/Otop-3D/

Attachment/links :
http://idele.fr/reseaux-et-partenariats/otop3d/publication/idelesolr/recommends/otop-3d-les-dispositifs-dacquisitions-sont-prets.html

Prerequisites and/or limits :

- Depends on the configuration of the restraint park
- Still in the test / prototype phase

Costs and Challenges

- Set up costs: 5 000 € - 15 000 €
- Subscription required: No
- Ease of use? Scale 1 (Complicated) – 10 (Simple)

1 2 3 4 5 6 **7** 8 9 10

- Value for money (for this type of benchmark farm)? Maybe

- Recommend this tool/technology for use on other types of farm? Yes
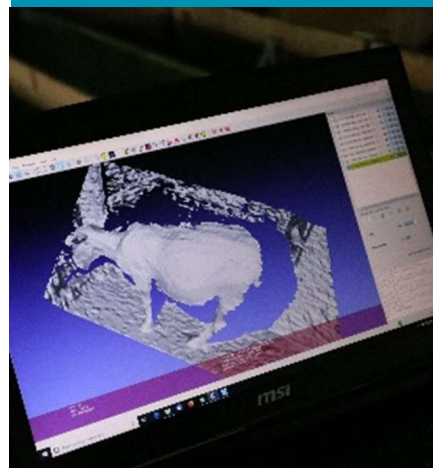

This technology is a prototype being tested on the French meat sheep Digifarm. It can be used to estimate the weight of animals using 3D images. Future objectives are to obtain other information such as body condition score, plumbness, etc.

FARMER FROM FRANCE

★★☆ It would take 22 years for 72% adoption in Estonia.

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