Ewe Productivity: A new trait being researched by Sheep Ireland

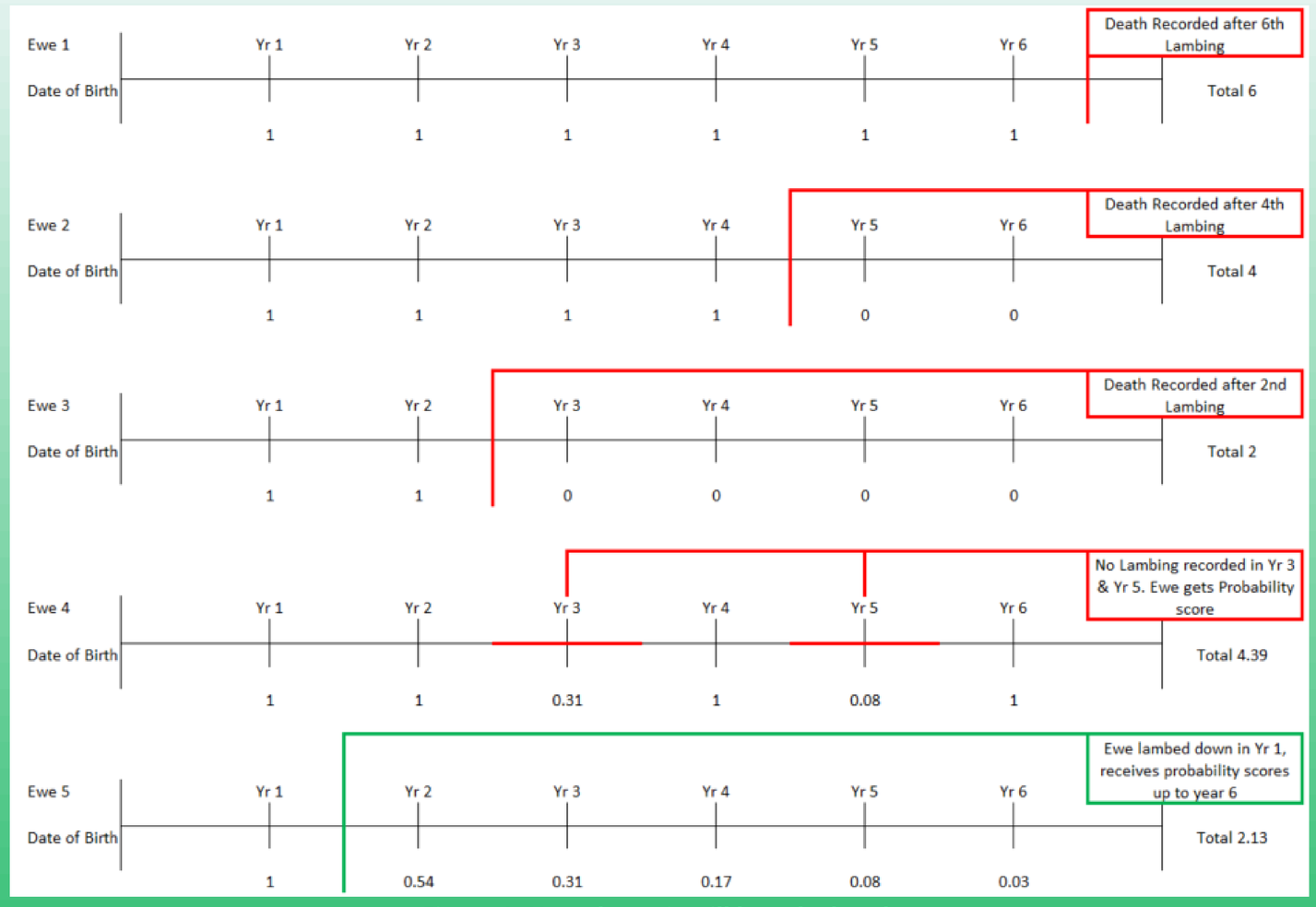

Figure 1. How the trait will be calculated.

Proposed method of evaluating this Trait

- For each year a **ewe lambs down** she receives a **score of 1**. If the ewe has **no lambing event** recorded and wasn't recorded as being dead, she will get the **probability score** of having a lamb in that year, based on her breed.
- In the Image opposite, 3 scenarios are outlined.
- Ewe 1, 2 & 3 have **death dates recorded**. They have had a lambing recorded for each year up to death. As all the necessary info is recorded, its is easy to evaluate the trait for these ewes.
- Ewe 4 has a death date recorded after year 6, but she has **no lambing event recorded** in Year 3 or 5. We don't know if she had a lamb in these years. She will get a probability score for these years.
- Ewe 5 is alive and has lambed in year 1. We don't know if she will lamb again. Tricky to evaluate.

Defining the Dataset

To analyse the data some rules were applied

- All lambing data was retrieved from the Sheep Ireland Database
- Only ewes **aged between 1 and 10** were kept.
- Ewes were kept if their **first lambing event** recorded had taken place when the ewe was **between 1 and 2.5 years old**
- Ewes had to have **consecutive lambing events** (no gap year) and a maximum of 10 lambings were retained
- Breeds with **more than 250 ewes** were retained in the analysis (96385 ewes from 16 breeds).

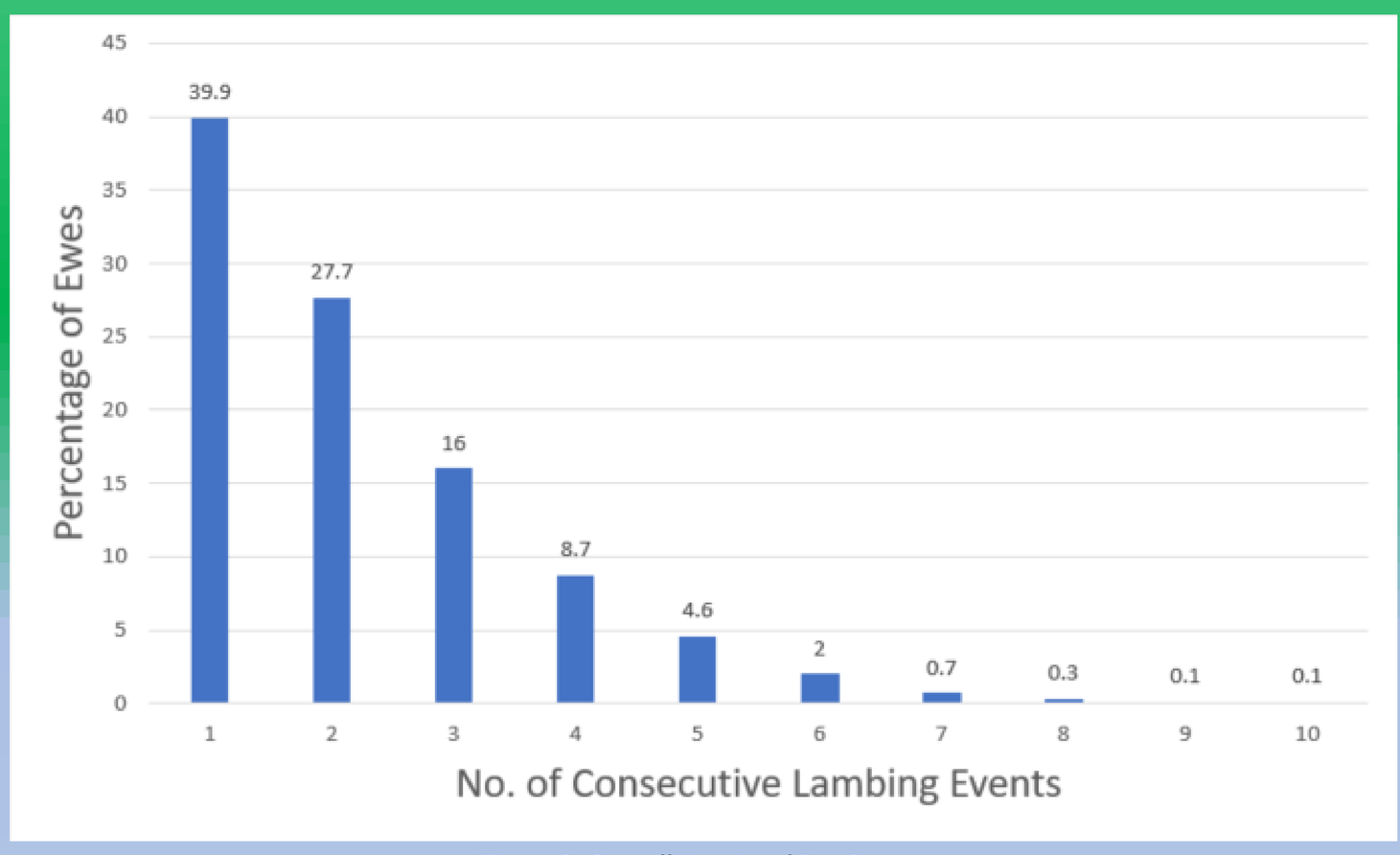

Figure 2. Overall Ewe Lambing Career.

How are we going to produce more accurate Ewe Productivity Evaluations?

- We need **more data**!! As can be seen from Image 1, recording all lambing events and death reasons is vital for this trait
- At present, the number of reasons for death recorded on the Sheep Ireland Database is small.
- **New web screens have been developed** to allow breeders to more accurately record the reasons for death.
- If ewes were **slaughtered**, breeders can record the reasons for this such as Old Age, Prolapse, Lameness etc.
- Farmers also have the ability to record the reasons for **on farm deaths**, such as Pneumonia, died giving birth, Liver Fluke etc.

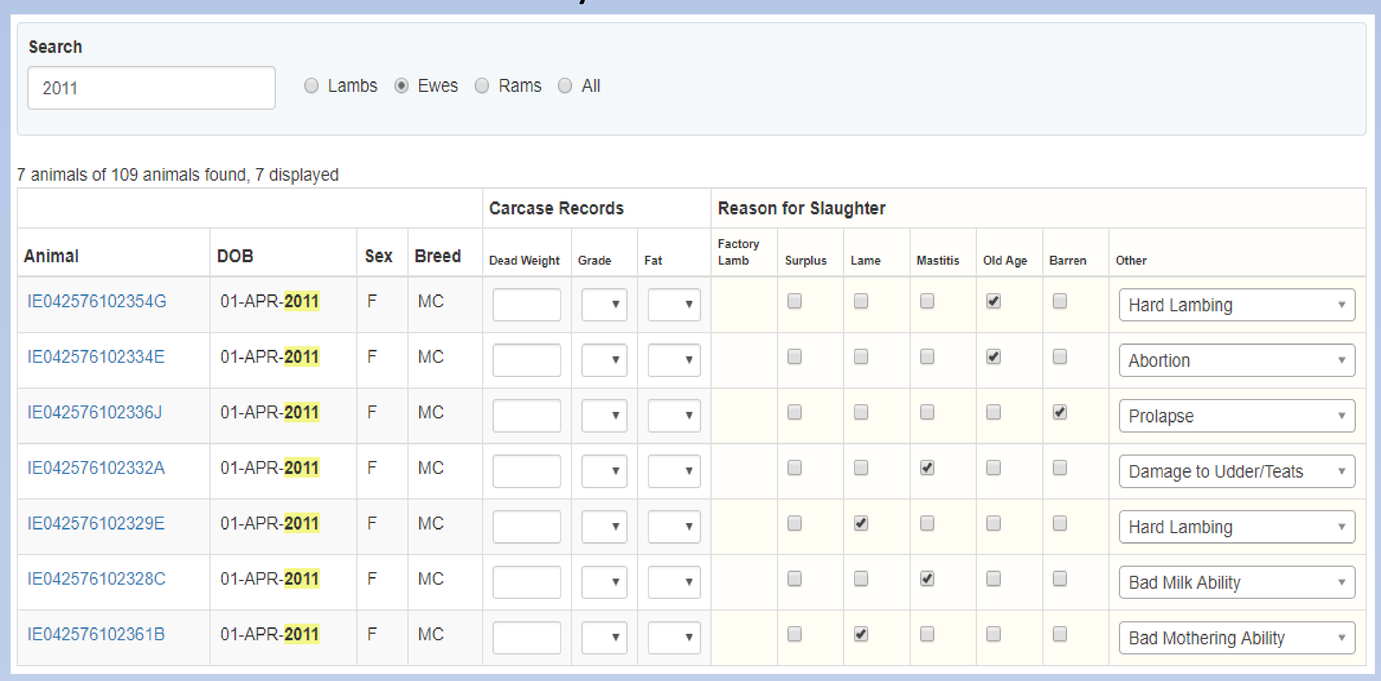

Figure 3. Screen for recording info on ewes that are slaughtered.

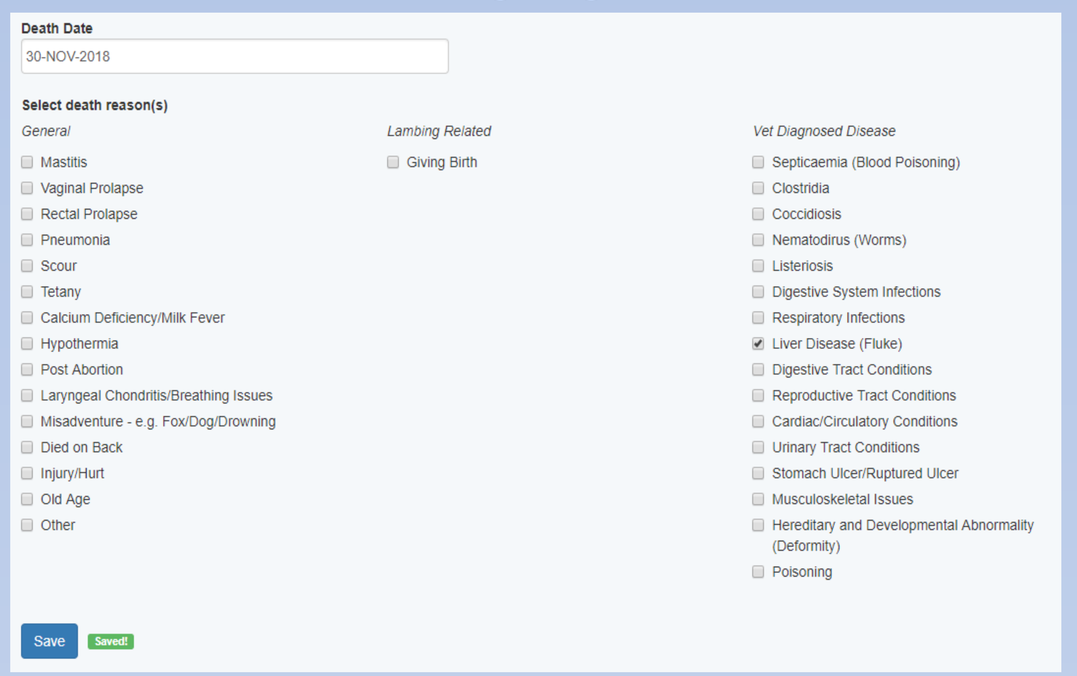

Figure 4. Screen for recording reasons for on farm deaths.

Conclusion

The research so far shows that ewe productivity is a trait that can be developed further and with the collection of more data around death dates and death reasons for ewes, breeders could be able to select bloodlines that will improve the ewe productivity of their flock.

Our Mission Statement:
To achieve the greatest possible improvement, from genetic and other factors in the profitability of the national sheep flock for the benefit of Irish Sheep Farmers and the Sheep Industry