

24 May 2022

Environment Southland
Private Bag 90116,
Invercargill, 9810

Attention: Jade McRae

Dear Jade

OVERSEERFM AUDIT – RESPONSE TO IRRICON REPORT QUESTIONS

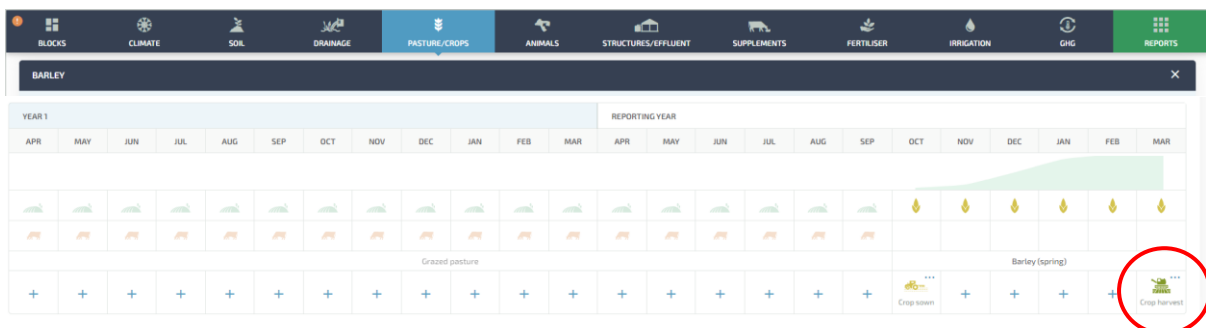
Thank you for providing the OverseerFM Audit Report completed by Irricon. The purpose of this letter is to respond to the questions in the Irricon report. These are provided below.

1. Please explain why there is no mean calving or dry off dates for dairy cows

Response: This was an optional input and was not added as the mean calving and dry off date is unknown and highly variable due to the proposed system, where replacement calving is dependent on the cow's ability to get in calf. This is why the lactation length was added as this is more specific.

2. Please explain why there is no harvest date for the barley crop in the Prop wo model

Response: The harvest date is in the Prop wo model (see below under pasture crops -> crop blocks -> barley -> edit crops -> crops on barley). I am unsure why this wasn't seen in the audit?



3. Please explain why the drawn area for the Base model differs to that of the proposed models

Response: There is no difference in the areas of the farm, except with the obvious difference based on the block changes. Overall, the farm is still 313.4 ha effective, 26.7 ha non-



effective and 340.1 ha total. Overseer states that “the block outline does not have to be exact as the accuracy of the drawing has no effect on the modelled results”. The inaccuracy in the drawings is merely human imprecision as the input of data was most important.

4. Please explain why the soil areas/types vary between the Baseline and the proposed models and between the proposed models

Response: In the baseline, the original farm 444 is a lot larger as there is no barley. Therefore, the Braxton soil is considered significant. According to OverseerFM best practice, “Only add dominant soils... within OverseerFM the smallest area which may be allocated to a soil is 10% of the block”. However, when barley is added to the original 444 farm area, Braxton becomes no longer significant.

The Braxton soil was removed from the Original Farm 444 area to evaluate what effect this had on the nutrient losses. There was no change, and the losses were still 34 kgN/ha/yr and 1.9 kgP/ha/yr for the Baseline model.

5. Please explain the high pasture harvest in the Base model for the beef area

Response: This is what the previous owner of the Hancox Block had told our client he had harvested. This was added to the baseline model as this is an actual farm system representation. It is best practice to do this.

Should you have any further questions, please don't hesitate to get in touch.

Yours sincerely,

Low Environmental Impact

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