



OVERSEER Nutrient Budget Review

T & J Driscoll - Updated
DATE: 31st August 2018
Prepared by: Kelly Heckler
AgriBasics Limited

Kelly Heckler CNMA Number 1008

AgriBasics Limited

Glassford Road

RD 2

Omakau

Central Otago

P: 0276030333

E: kelly@agribasics.co.nz

W: www.agribasics.co.nz

OVERSEER is a registered trademark of the owners of OVERSEER.

© Kelly Heckler, 2017

I have reviewed the updated OVERSEER Nutrient Budgets provided in the consent application for T & J Driscoll. The updated nutrient budgets are listed below

Driscoll Current Dairy Platform

Driscoll Current East block - Sheep

Driscoll Current East - Transition year

Driscoll Current East block - Dairy support

Driscolls Proposed system - FINAL

I have not reviewed the updated xml files, though I have been informed of the changes that have been made through the consent application. This review should be read in conjunction with the associated review T & J Driscoll Overseer Nutrient Budget Review dated 25th July 2018.

I am reviewing for sensibility of the OVERSEER Nutrient Budgets, based on the data I have available.

The updated files have been produced by Mo Topham, who isn't a CNMA but appears to be working towards certification. It has been stated that Mo Topham's work has been peer reviewed by Miranda Hunter who is a CNMA, which is perfectly acceptable.

The original nutrient budgets have been completed to a high standard and I have previously accepted them as being reasonable and expected. From the data I have reviewed, the updated nutrient budget results are reasonable and expected; therefore, I accept these updated nutrient budgets.

I agree that the OVERSEER Best Practice Data Input Standards have been followed, and the updated nutrient budgets have been completed to a high standard.

Nutrient losses

Driscoll Current Dairy Platform

Nitrogen leaching from the current dairy platform is 53 kg N/ha/yr. A phosphorus loss of 1.2 kg P/ha/yr is occurring.

Driscoll Current East block – Sheep

Under the sheep scenario the nitrogen leaching occurring is 15 kg N/ha/yr. A phosphorus loss of 0.7 kg P/ha/yr is occurring.

Driscoll Current East - Transition year

The cut and carry scenario of the transition year is leaching 10 kg N/ha/yr. A phosphorus loss of 0.7 kg P/ha/yr is occurring.

Driscoll Current East block - Dairy support

Under the dairy support scenario nitrogen leaching of 28 kg N/ha/yr is occurring. The phosphorus loss is 0.7 kg P/ha/yr

Driscoll's Proposed system – FINAL

Nitrogen leaching of 51 kg N/ha/yr occurs under the Proposed scenario. A phosphorus loss of 1.3 kg P/ha/yr occurs.

Overall, the results from all nutrient budgets are reasonable and expected.

Additional Comments

In regards to drainage, I accept the drainage area is an estimate. Often details regarding drainage history are unavailable. Reported N leaching could vary modelling a lower drainage area estimation. Currently the parameters are the same in both scenarios, so providing the parameter is constant in both scenarios; any differences in N leaching will be similar. The current modelling is acceptable across all scenarios.

I acknowledge that farm data can be hard to gather, for a number of reasons, and I agree that it is an acceptable reason for using the default settings, especially in regards to animal weights.

I recognise there is a commitment to reduce N use going forward, importantly on the effluent areas.

Ideally, specific Olsen P results would be entered for each block. A 3-year rolling average of the block soil test results would be preferred, though this is not always available. An annual average of Olsen P results across the farm, from annual soil testing, is not as accurate as input of individual block Olsen P soil test results. However, the method of input is the same across all scenarios. Any variance from the reported results would be similar across all scenarios; therefore, I see no reason to alter the modelling of any scenarios. I acknowledge it is perfectly acceptable to use default soil test values, excluding Olsen P, when only concerned with Nitrogen and Phosphorus results.