MAF POLICY
Agricultural Inventory Advisory Panel Meeting
15 November 2011

BETTER ESTIMATION OF NATIONAL LIVEWEIGHT – PART 1 EWES

Authors: Andrea Pickering

Main Purpose: ☑ Decide ☑ Discuss ☐ Note

Purpose of Report

1. Seek approval from the Agricultural Inventory Advisory panel to change the method in which ewe liveweights are determined.

2. Attached to this paper are:

    a. The report "*Better estimation of National Ewe and Beef Cow Liveweights"*.

    b. The review of the above report by RD Thomson.

3. This briefing is 1 of 2 briefings on estimating national liveweights:

Summary

Background

4. New Zealand has an obligation under United Nations Framework Convention on Climate Change Convention (UNFCCC) to report the anthropogenic greenhouse gas emissions and removals every year. Emissions are reported in the annual submission of the National Inventory Report submitted to the UNFCCC. New Zealand also has a responsibility under the Kyoto Protocol to reduce emissions growth and if not successful will incur a financial cost.

5. The National Inventory Report (NIR) forms the base of any financial cost that the country may have under the Kyoto Protocol. Therefore reported emissions and removals need to be as accurate as possible. New Zealand has a long standing research program in estimating country specific emission factors to aid in the improvement of reported emissions and removals from the land based sectors.

6. Changes beyond the default methodology and emission factors to take account of country specific factors are encouraged and need to be well documented and transparent.

Current Inventory

7. The Inventory model estimates dry matter intake, and consequently methane emissions and nitrogen excretion, based on productivity inputs including the liveweight of an animal.

8. Currently ewe carcass weight is the input into the model, and a dressing out percentage of 43 percent is used to convert to liveweight.

Report

9. As part of the Inventory research program, a review of the current assumptions around breeding animal weight was carried out as these weights have a major influence on the estimated emissions from agriculture.

10. The report noted that current liveweights estimated in the Inventory model maybe lower than they should be due to a too high a dressing out percentage used. This was due to the fact that many slaughter ewes are used culled due to age or condition and so may not be representative of the national breeding flock.

Proposed changes to inventory

11. The report recommends using a dressing out percentage of 40 percent for estimating liveweight from ewe carcass weight.

Implications to emissions estimates

12. Changing the dressing out percentage increases emissions from sheep in 1990 by 235.7 Gg CO_2e and in 2009 by 139.5 Gg CO_2e (1.6 and 1.4 percent increase in sheep emissions respectively). Agricultural emissions increase by 0.8 and 0.4 percent in 1990 and 2009 respectively.

Reviewer comment

13. The reviewer agreed on the above recommendation.

Strategic Risks

14. The changes may not be accepted by the *United Nations Framework Convention on Climate Change* (UNFCCC) reviewers. However, if this is the case there is an extensive process which is followed in which New Zealand can state its case or change back to the IPCC default before any penalty would be applied.

Strategic Opportunities

15. New Zealand will be meeting the UNFCCC obligations of continual improvement of the National inventory.

16. Emissions from New Zealand Agricultural Inventory will be calculated more accurately and models will more accurately reflect industry practices.

Recommendations

It is recommended that the Agricultural Inventory Advisory Panel:

17. ***Agree*** *that the dressing out percentage used to estimate ewe liveweight be changed to 40 percent.*

Agree / not agreed

Andrea Pickering
Senior Policy Analyst

Approved/ Not Approved/ Approved as Amended

Alice Marfell-Jones
Manager Information and Analysis
Chair Agricultural Inventory Panel

Date