

8th Livestock Research Group meeting

19-20 February 2016





Building capability to measure, predict and report on livestock GHGs is a major area of activity for the LRG:

- Technical guidance manuals (N₂O, SF₆, CH₄ chambers)
- Measurement and GHG inventory training (including with FAO)
- Flagship regional capability building projects
 - CCAC/LRG projects on manure and CH4
 - FONTAGRO
 - South-East Asian regional scoping study
- Fellowships and award schemes

Communication / awareness raising with stakeholders:

- Guidance and collaboration with industry (SAI Platform)
- Case studies of country success



Flagship capability building activities with FAO, CCAFS, Climate & Clean Air Coalition, SAI Platform



Global Assessment of Manure Management Policies and Practices

E. Ternstra, T. Vellinga, N. Anktaraeng, W. Ametayokus, A. Adendi, D. Pelster, C. Germer, A. Jonet, C. Opto, N. Andeweg





Reducing greenhouse gas emissions from livestock: Best practice and emerging options



REDUCING ENTERIC METHANE

for improving food security and livelihoods



Case studies of success (x8)

ON AGRICULTURAL GREENHOUSE GASES

REDUCING THE EMISSIONS INTENSITY OF LIVESTOCK PRODUCTION:

CASE STUDIES OF SUCCESS

GLOBAL RESEARCH ALLIANCE

ON AGRICULTURAL GREENHOUSE GASES

INDONESIA

The state of

Scale: Local System: Housed Sector: Seef

Dietary changes to improve beef productivity in Bantul, Indonesia

Over a pennior of three years, smalthwider farmers near the city of Bondu in the "Toggladaria promote of Indonesia have introduced new management practices and technologies, including legarithmic technologies, including legarithmic beer cattle productibility and reduce emissions intensity.

Background

Beef cattle production near Banbul in the province of Yograkarta is largely small-scale. and is a secondary activity to paddy rice cultivation. Farmers own around 2-4 heads each, used mainly for local meat production. Banks farmers formed the Ngudi Hulys Farmer's Organisation (NMFO) in 2011 and new briese their animals in a rommental facility owned by the NMFO. Animals were being fed a diet of moe straw and nice brain by-products of rice harvesting. Fluctuating feed supply liess available during the dry season) and feed quality (deteriorating as it dries out after harvest was severely impacting animal productivity with low fertisty rates affecting the long-term sustainability of the nerd.

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Making page 2015

Bills bee Hill

24.3 %

WHEE BRIDE

Diet sergit



Key actions & their effects on productivity, income & food security

in 2012, the heliFD begin receiving training and assistance from researchers and entensies start at 8979 Yegomarts As securred involvate for Agric vibural Technologi to begin reprose productive. A range of different management practices and lechnologies were introduced.

Farmers were stown near techniques: Circepping and remnetationi for prices sing the rice stars and trast that makes up the busk of the animatic dect, andmerer also begind how to use concentrates and additives to business sufferest levels. Jamu Ternakir is a traditional indoversale field additives only the processing of the additive companies person, gent and protects. The ingredients differ from region to region depending on availability of local, herbs. Some farmers also add honey and more exps.

Four legame fine species were introduced as a high profile fined suppliment to the california (in disposition). These times grow widely recognize all distancials. These times grow widely fine local area and are mostly evergrees although lest production decreases during the dry season. The legame times were introduced at on more than 55% of the animals pally diet, with a period regarded to be to be retired to adoption.

The insults on product till years or answer with significant increases in herbilly rates, birth weights and overall seinast beath preter to tables I and Z. This meant that the sittings of only became set outfailed in terms of the own supply needs but was also to set surplus cake at all appear price than prior to receiving the diff in training messible in increased income for brames.

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REDUCING THE EMISSIONS INTENSITY OF LIVESTOCK PRODUCTION:

CASE STUDIES OF SUCCESS

GLOBAL RESEARCH

ON AGRICULTURAL GREENHOUSE GASES

CHILE

Scale: Regional System: Pastoral Sector: Daily

Using fodder turnips as a supplement feed in dairy grazing systems

In Southern Chile, dairy production is based on direct grazing of permanent pastures. Commodit, one of the major lambations is the law day matter availability during sommer. To exercome this, Indefer turnly can be used as supplementation as its inclusion results in a 2°Ts increase in daily milk production over the summer period (60 days, at a 2.8 times lower cast than the use of a traditional concentrate.

Background

in Southern Chille dairy production is based on direct grazing of permanent pastures. The main limitation is this system is that pasture yield and quality are variable throughout the gene with feed deficiency times, especially during winter and summer. Of these two periods, summer Liminary, February is the most critical time as there is able a reduction in pasture rustritional quality.

There are different alternatives to overcome this deficit, being suppliementation with either concentrates, preserve firinges or thesis firages a lay bactor to increase milk production. Among thesis, folder manip represents a good alternative for formers because in a short period of time 109-80 days) this crop provides a high yield 193-13 ten day mannethal. This priod, although with low day nather SMI concentration 18-10%, has high dispetibility 189-90% and 18-10% has high dispetibility 189-90% and matabolicable energy valves (27-3.00 MeW) kg DMI, of which 90% is available in the Consen.



Key actions & their effects on productivity, income & food security

Since the early 2000s, and because of the low quality and yield of permanent pastures during summer emonths, farmers have incorporated the use of hother turnly as a supplementary level. This supplementation has been slowly introduced in dairy systems in response to the reduction in semmer anisate, which in hour reduces pasture yield and quality. The stati amount of imported used has increased nearly 10 times over the 2003-2014 period, saying between 1,400 kg seed in 1003 and 11,000 kg in 2014, covering over 2000 has the summer.

Hebstein Friedon daily came are voxably the dar this time of they pair with A. Sig dy matter as permanent pasture + 3 kg dy matter as pownrained pasture + 3 kg dy matter as pownrained as their base des. Farmers are occessorate as their base des. Farmers are supplementing this base diet with 5 kg dy matter as termin, Turnip is traditionally effected as direct grazing, reaching up to 88-95% of pracine officiency.

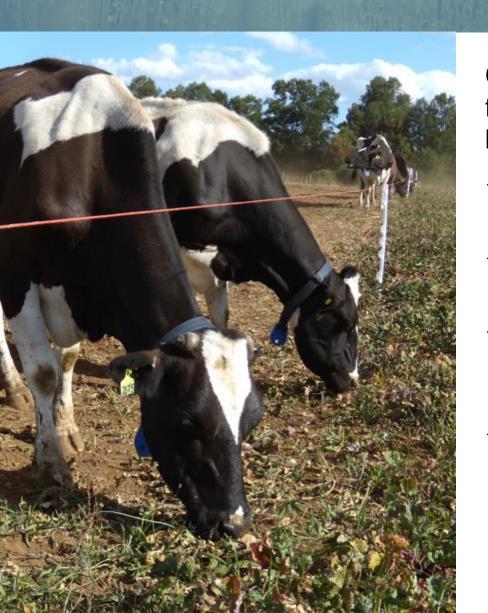
The impact on milk production and quality protein, fat, factors, uma and milk settled has been recorded as a result of this freeding strategy. Thus, alony production were the two sammer months can be 21% higher in the turnip supplemented cross-in relation to those eating the base diet only, with no differences if compared to the supplementation with traditional concentrates. Milk solds also increase. The core of 1 lap of dry matter in the turnip only was 2.5 times lower than that of the cincomtrate (V.1 and 25 cores US\$/sq.DM.). These results four the adoption of purries as the main supplementation option for



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Building capability in 2016+





Countries are interested in moving from Tier 1 to Tier 2 inventories to better account for livestock emissions

- ✓ report reductions in emissions intensity arising from productivity gains
- ✓ supports broader agricultural and economic development goals
- ✓ links emissions with understanding of nutrition requirements (CH₄/kg dry matter)
- ✓ not necessarily much more complex than Tier 1 inventories



...to focus LRG capability building efforts in 2016-17 on helping countries move towards Tier 2 inventories & designing improved MRV systems for livestock GHGs...

What could this look like?



- Workshops to demonstrate benefits to policymakers
- Targeted training courses
- Support for country-specific processes
- Additional/updated technical guidance manuals
- Regional projects to identify and develop appropriate intervention packages to reduce emissions intensity and increase productivity
- ... and strengthen evidence base from countryspecific measurements
- Demonstrating success via case studies and practice briefs: showcasing benefits from improved inventories for policymakers and industry



Priorities? Resourcing? Existing programmes?



- 1. Do you agree with this focus in general for the next 12-18 months?
- 2. Specific interests/needs from country?
- 3. Links with partners / existing capability building and funding mechanisms?