

### Over view Tokoroa Pastoral Ltd

70 ha's

67.5 ha's effective

Crossbred herd 2.5 cows/ha

Climate an increasing challenge

Managed by staff,

Aiming to be a system 2 farm

#### What we are trying to achieve: (in order of priority)

Absolute reductions in GHG's - primarily methane & Nitreos oxide, do our part

Maintain and improve GHG efficiency per unit of product, maintain international competitiveness.

Keep exports crossing the border, NZ is a trading nation and will be for the foreseeable future

#### 2019 Case Study by Agfirst for Dairy NZ

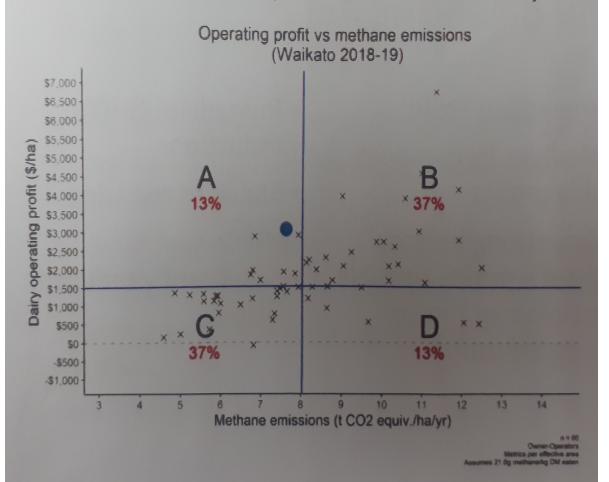
- "Highly efficient, can only slightly reduce GHG's without impacting profit".
- "Reducing replacement rate can acheive small gains in GHG reductions & increase profit slightly".
  - "Option relies heavily on reducing not incalf rate".
- "Reducing stocking rate & reducing supplements is most effective in reducing GHG's but requires the greatest amount of skill and increases financial and climate risks".

#### Summary of Options Modelled

Change from Current System	Nil Imported Feed	Less N fertiliser	Less N fertiliser nil imported feed	Rear less replacements	Plant slidelings into trees
N leaching (%)	-7%	-20%	-29%	-2%	-5%
GHG reductions (%)	-12%	-8%	-20%	-3%	-6%
Profitablity (%)	-5%	-8%	-10%	+5%	-12%



#### Tokoroa Pastoral Ltd compared to other Waikato dairy farms



# 2020 Initial Step Change Program by Dairynz

### Lightbulb moment!

If whole herd performed at these levels then cow numbers could drop 20%

Herd average 16/17 yr 445 kgs ms

#### Cow 153 560kgs LW

- ▶ 14/15 yr 519 kgs ms in 213 days OAD
- ▶ 13/14 yr 564 kgs ms in 234 days
- ▶ 12/13 yr 651 kgs ms in 266 days

#### Cow 146 480 kgs LW

- ▶ 17/18 yr 574 kgs ms in 249 days
- ▶ 16/17 yr 552 kgs ms in 235 days
- ► 15/16 yr 514 kgs ms in 265 days as a heifer

## Our strategy for trying to reduce GHG's

- Play the long game chase permanent incremental gains. Time is our greatest ally.
- ▶ Be at best or near best practice regarding fertilizer timing, placement, amounts & animal welfare.
- ► Chase high performance per cow over a short lactation. Thereby minimising need for purchased feeds to extend lactation.
  - ► Make every animal a winner
- Expidite genetic gain thru vigorous culling & improving repr' performance, (real challenge)
  - ► Continual monitoring Dairybase & Overseer
- Improve balance sheet and enhance P & L.
  - ▶ Always look ahead and believe in the future.
  - Walk towards what scares you

Cow numbers 180 - 167 and falling

Nitrogen 240 ->115 kgs/ha

Herd BW from top 50% to top 3%,

Focusing on the herd improvements

Peak milk & total milk-solids per cow trending up

Days in milk trending down, 250 DIM -> (230 -240)DIM

Milk solids total "flatish"

GHG's total appears to be falling acknowledge early days

GHG's per kg milksolid appears to be improving Seasons increasingly challenging the system 2. Failed last season.

# The Challenges & frustrations:

All the models use a "back calc" for pasture eaten - therefore efficiencies unstated

Chasing genetic gain = younger less efficient herd in short term

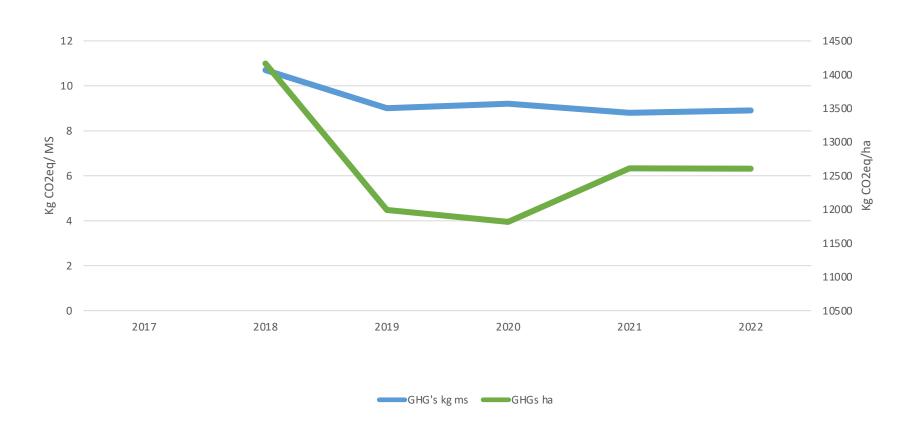
Chasing genetic gain = more young stock in short term

As per cow performance increases mating performance becomes more challenging and expensive

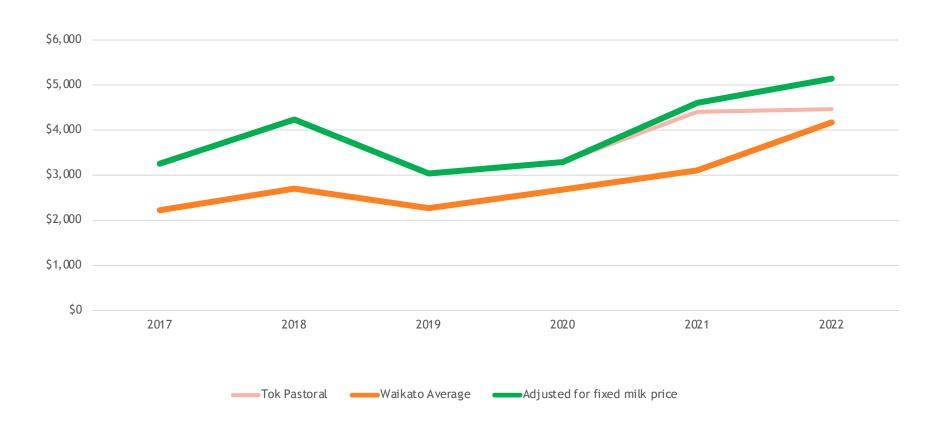
Getting staff to understand the needs of high performing cows and the importance of GHG's.

Grass management difficult, but critical in effectively managing reducing stocking rates.

#### GHG/ kgMS vs GHG/ha



#### Economic Farm Surplus





#### ► FURTHER INFORMATION

https://www.dairynz.co.nz/environment/ agricultural-greenhousegases/greenhouse-gases-on-farm/climatechange-action-farms/tokoroa-pastoralwaikato/

https://www.agmatters.nz/