

Hands-On Farm Reports



April 2022

Table of Contents

IFMA COUNCIL MEMBERS 2022	3
INTRODUCTION	4
INTERNATIONAL FARM MANAGEMENT ASSOCIATION (IFMA)	5
ARGENTINA (SANTA FE)	6
AUSTRALIA (TASMANIA - MEANDER VALLEY)	9
AUSTRALIA (TASMANIA – SOUTHEAST COAST)	12
BRAZIL (MATTO GROSSO DU SUL)	14
CANADA (PRINCE EDWARD ISLAND)	16
KENYA (KAKAMEGA)	20
THE NETHERLANDS (FRIESLAND)	23
NEW ZEALAND (NORTH ISLAND)	26
NEW ZEALAND (SOUTH ISLAND)	29
SLOVENIA	33
UNITED KINGDOM (NORTHUMBERLAND)	36
IFMA CONGRESS INVITE	39

Note:

All the authors of the reports are resident within the relevant Country and directly involved with the management of the farming business.

IFMA Council Members 2022

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South America:	Dr. Mariana de Aragão Pereira	Brazil
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22 nd Congress 2019:	David Armstrong	Tasmania

Introduction

The 4 C's - Conflict, Climate, Covid and Cash - are our current reminders that the world remains a very fragile place. Disrupters individually, throw them all into the mix at the same time and change of the world we knew is inevitable. Our agriculture businesses, and their management teams, will need to be very nimble and capable to respond quickly.

Conflict in Ukraine has brought about a humanitarian tragedy. Much of its infrastructure, required for the economy to function normally, is damaged beyond repair. One of the key bread baskets of the world is likely to be nowhere near full this coming year, inevitably resulting in food shortages. Trade sanctions and the weaponizing of energy also come with this conflict bringing the consequence of inflation due to high energy prices and disrupted trade flows.

Climate, either in abundance or scarcity, has always had the ability to disrupt food production cycles. History has long recorded periods of famine and feast. However, advances in 'Husbandry, Technology and Global Trade' have largely negated the production concern surrounding food security. Worldwide agriculture agendas talk about 'Natural Capital', 'Regenerative Farming' and 'Net Zero' whilst our impatient climate responds ruthlessly with more frequent and extreme weather events.

Covid continues to sap family livelihoods and their savings. It has disrupted food supply chains and inflated the cost of food. The food-price index, based on the prices of commodities such as meat, dairy, cereals, and other goods, is at its highest in a decade. Travel has been restricted and working from home, via virtual meetings, have become the norm in our working lives. Consequently, lifestyles and lifestyle expectation have changed. Coincidence maybe, but increasingly employers are faced with labour wanting reward on their lifestyle terms, regardless of the demands or commitment the business requires.

Cashflow is king, profit is sanity and turnover is vanity. Record high commodity prices at the end of the production cycle will provide vanity. However, with input costs seemingly rising higher everyday profit and sanity will be brought into question. Cash flow is king and unmanaged it will quickly take away the liquidity of the business. Production formulas will need to be reset and re cash flowed to reflect the new input/ output price parameters.

IFMA value the importance of friendships that facilitate the sharing of knowledge and experience regardless of background. Hands-On farm reports are a key part of keeping this IFMA network working and stimulated for which we are all grateful. We welcome new reporters who want to tell IFMA about their businesses. To this edition we welcome Ruby Daly from Tasmania, Andrew Makatiana from Kenya, Simon Čretnik from Slovenia and Tamara Wind from the Netherlands.

We thank all reporters for their time and hope that in return the IFMA network will help them, and their businesses stay nimble and respond quickly to our rapidly changing world.

I look forward to seeing you all in Copenhagen this summer.

Trevor Atkinson – IFMA President

International Farm Management Association (IFMA)

IFMA is a society for people who are involved directly or indirectly in the agricultural process and who have an interest in the agriculture of parts of the world other than their own, exchange of knowledge and best practice.

This includes the whole spectrum of individual and corporate producers, farmers, managers, advisors, researchers, teachers, policymakers, suppliers, farming and marketing organizations and agribusiness companies associated with agriculture, horticulture and rural enterprise.

IFMA has members in over 50 countries is organised and co-ordinated by a Council, with members drawn from around the world.

The objective of the Association is to further the knowledge and understanding of farming and farm business management and to exchange ideas and information about farm management theory and practice throughout the world.

- **IFMA International Congresses:**

These are organised every other year in countries around the world. They are organised locally, usually last for 6 days, which together with additional pre- and post-congress tours, provide not only an occasion to discuss farm management and agriculture in a global context, but also to learn a great deal about the host country's farming structure and its people. They are a totally unique experience.

The 2022 IFMA Congress which is the 23rd International Farm Management Conference will be hosted by the University of Copenhagen.

- **19th to the 25th June 2022 - Pre tour** http://ifma23.org/download/pretour_web.pdf

The pre congress tour covers Norway and Sweden starting in and arriving in Copenhagen ready for the Congress on the 26th of June 2021 which is midsummer day.

- **25th to the 26th June 2022 – Next Gen Program**

This is a special programme which is being developed by the congress organisers for the next generation of farm managers and professionals and builds on the very successful one that took place in Tasmania in 2019.

- **26th June to the 1st July 2022 – Congress** <http://ifma23.org/index.html>

This will be the 23rd IFMA Congress whilst it follows a well proven format allowing delegates and speakers to exchange best practice its also allows the organisers to bring a flavour of the host country Agriculture management style and culture.

- **1st to the 9th July 2022 – Post Congress Tour** http://ifma23.org/files/20200409_Post-Congress_hjemmeside_compress.pdf

The post congress will allow the participants to gain a full understanding of modern farming practices in Denmark whilst taking in the culture and history of the country.

Argentina (Santa Fe)



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Farm Overview

Climate	Farm Area	Arable	Livestock	Soils
Rainfall 2022 373 mm	Grassland 520ha Arable: 3,270 ha	Wheat, Barley, Pea (Pisum salivum), Corn, Sorghum. Soy	1,300 head of cattle. Raising and rearing. All Aberdeen Angus	Class 1, 2 and 3: 80%, Agriculture apitude, and then class 4, 5, 6 and 7, cattle raising and rearing aptitude.

Seasonal Challenges

Summer in this region is very dry we did everything we could to get the best results, but there is one thing we still cannot control, and that is climate. Climate has been dry for two years now, so the yields we obtain may be partly explained by this reason.

Nowadays harvesting Corn, Soy and Sorghum is our priority. Some have started the first days of March, but the vast majority will be starting these days and during April.

Corn yields are well below the average we usually have (10-12 tn/ha average, this year it is 8-9 tn /ha).

Soybeans are going to have varied yields, depending on the quality of the lot.

We are also planning the next season, deciding whether planting winter crops or not, and if we do, how much surface. Given the price of inputs, especially fertilizers, it is becoming very difficult to invest in crops that require a lot of nutrition.

As regard as winter crops, we decided to reduce surface comparing with past years, and we added to our plan a new crop which is Pea (*Pisum sativum*). It is normally planted in July, and the harvest is in mid-November. So here we have the challenge of doing something new.

Regarding cattle, this year, our plan is to keep all the recently weaned calves until the end of the year. We weaned with an average of 205 kg, and we are going to fatten them on pasture until November- December. Fattening the animals with corn is not a business these days.

What's on My Plate

- Harvest logistics
- Planning next season-2022/2023
- Buying inputs for Winter crops (Wheat, Barley, and Pea)
- As regard summer crops, Soy is the one with the best margin if we compare with corn.
- Planning the business also financially, as it is known, Argentina has its own, political, and economic problems, apart from the sad war conflict that is going on between these two countries.
- We are stocking up on diesel since there are rumors of scarcity.



Looking Ahead

- Continue to improve in livestock and pastures
- Staff training in machinery, good farming practices and pasture management
- Stabilize in livestock, since we almost achieve the goal of 800 cows of reproductive age, and we currently have 1300 animals in the field.
- Try to achieve maximum profitability in these months, given the volatility of prices of everything related to this business.
- Continue with the growth plan in Formosa province



Key Activities Over Next 6 Months

People	Operational	Strategic
<ul style="list-style-type: none">• Training program	<ul style="list-style-type: none">• Harvest logistic• Planting winter crops• Animal vaccination	<ul style="list-style-type: none">• Buy inputs• Try to take advantage of the incredible prices of commodities.

Australia (Tasmania - Meander Valley)



Alastair Bowman

Meander

Tasmania

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Farm Overview

Climate	Farm Area	Arable	Livestock	Soils
Average rainfall: 1,100mm Temp: min 4 deg C max 24 deg C	Total area: 820 ha Arable: 633 ha Forestry: 187ha	25 ha of Spring oats 20 ha of Nui rye grass 30 ha of Industrial Hemp	Dairy: 340 milkers Cattle: 70 Dairy x Beef	Irrigation: There are 2 pivots on the dairy land and 3 on the homeland.

Seasonal Challenges

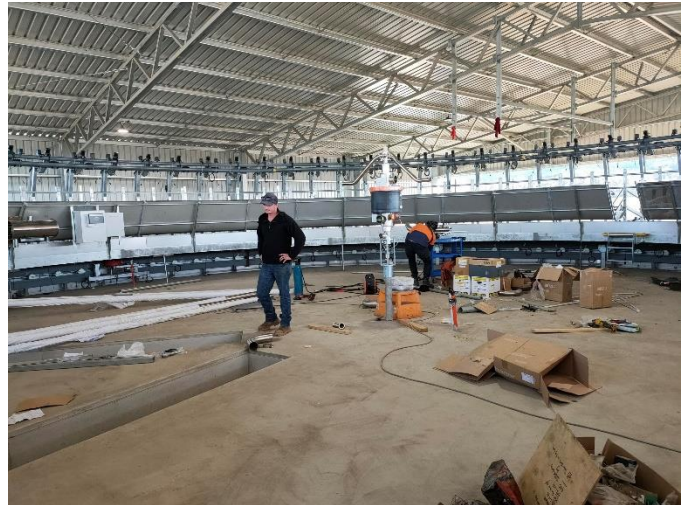


Tasmania, like most of Australia, the Eastern side has had good rainfalls. QLD, NSW and Vic have had multiple big floods which is quite abnormal. The season for us has been drier than average which has been ideal for harvesting and making silage. No muddy wheels bringing undesirable Bacteria into the silage pit.

What's on My Plate

Dairy

Re-fencing to suit the dairy management will begin soon as will water reticulation. Resowing some pastures with a mixture of 3 perennial grasses and 2 is happening as I write. A little later than desirable. The team has been busy making the alterations to accommodate the dairy.



Sheep

The ewes were sold in February at a good price @ \$200/hd. Most of the lambs, now 5 months old, have been sold at about \$175. Due to the warmer weather fly strike has been a problem. We don't apply preventative chemicals as it is usually not worthwhile.

Crops

The last of the potatoes will be harvested today by a neighbour who has rented a paddock from us.

Two new pivot irrigators have been installed. As these cross multiple ditches we have made 55 concrete slabs 4m-1m-30mm to form bridges for the wheels. To purchase them would have been \$3500 each. We make them for \$550.

The introduction of bio products to enhance soil health is showing benefits. Fertiliser applications are being reduced by 66%.

Looking Ahead

The dry weather has been ideal for construction of the new dairy site and road building for the cows to travel on daily. Our contractor has used two 30t trucks to haul a course mudstone from the foothills to form the roads. With a total weight of 60t they have compacted the material quite hard. Shale stone from the same site will be put on the surface. It doesn't contain any pebbles which can get stuck in the cows' feet. The maximum walking distance for the cows will be 1.8km to the East and to the West.





Key Activities Over Next 6 Months

People	Operational	Strategic
<ul style="list-style-type: none">• The paper trail is endless for building a new structure and it's mostly being done by the suppliers and consultant. Thank goodness	<ul style="list-style-type: none">• Continue working on new infrastructure and getting the Dairy up to capacity	<ul style="list-style-type: none">• Dairy - Project management• All the calves will be kept this year either as dairy replacements or for beef

Australia (Tasmania – Southeast Coast)



Ruby Daly

Daly's Farm

Southeast Coast

of Tasmania

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Farm Overview

Climate	Farm Area	Arable	Livestock	Soils
Average rainfall: 500 -600 mm Temp: min -6 deg C max 40 deg C	Total area: 780 ha 150ha Leased	Potatoes: 6,000 tonnes fresh market potatoes. Grass and Lucerne as cover crops	Breeding Cattle: 250 Black Angus 230 Angus calves at foot Sheep: 200 ewes	Sandy Loam Soil Irrigation: There are 6 pivots plus 5 Hard Hose.

Seasonal Challenges



Tasmania experience its driest year on record in 2019 with only saw 405mls of rain for the whole year in our growing area, then as Australia started to see the effect of La Nina pattern, we received high rain fall for long period of time. Which sent potato production into a spin.

Planting season was late due to heavy rain full around planting time. We received 85 mls of rain in June 2021 which is well above avg (40mls). This then pushed production back 6 weeks. As we supply the major supermarkets, supply must be 52 weeks of the year.

This then puts a huge amount of pressure on supply, and we then had to outsource potato supply from other farms.

The ongoing challenges with rain around planting then cause quality issues for new season potatoes.

Our pack out of saleable product has dropped by 20% due to due quality issues.

Livestock price are well above market avg. Due to plenty of rain we have abundant of feed.

Also seen increase of 200% for fertiliser and chemicals which put pressure on already fine margins. Increasing diesel prices are also becoming a problem.

What's on My Plate

- Business plan for feedlot which is a part of our plan to help build up cattle stock
- R&D for new fresh market potato variety's
- Business plan for utilising unsaleable potatoes
- Weekly management planning



Looking Ahead

- We are working on creating a feedlot to utilise waste potatoes by mixing potatoes with other ingredients in a Mobile feed mixer recently purchased.
- Working on value-add lines which takes the pressure off one sole product
- Work on business strategy with my team
- Ensuring all our customers continues to see sales growth

Key Activities Over Next 6 Months

People	Operational	Strategic
<ul style="list-style-type: none"> • Ensure staff shortages are managed • Improve safety and job descriptions • Keep a positive work environment 	<ul style="list-style-type: none"> • Improve skin finish • Work on production lines • Help develop new lines for supermarkets 	<ul style="list-style-type: none"> • Improve the company structure and succession plan • Working on 5-year plan • Minimise risks with climate change

Brazil (Matto Grosso du Sul)



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Farm Overview

Climate	Farm Area	Arable	Livestock	Soils	Other
Rainfall: 1,300- 1,400mm	Total: 1,720ha Pasture: 485 ha Arable: 810 ha	Soybean Corn Sorghum	Calves Production Finishing Cattle Total herd: 800 animals	About 35% of ARGIL medium Fertility	Lease contract for Soy
Temperature Range: 14-35°C	Permanent Preservation Area: 425 ha (24.7%)				

Seasonal Challenges

The rain season started very well in October, November, and December 2021 with higher average of raining. We were excited about it waiting for a great year on the farm but in the beginning of 2022, we had bad surprises. In the first 3 months we had the same challenge with shortfall rain. Differently from last year, now we have our water mechanical system finished and working very well. This water system will provide quality of water for the beef cattle (figure 1). It has been helpful and because of this we are improving our pasture management.



Figure 1 Rubber Tank: The water solution in your farm. Less cost, eco-friendly, high durability. Find out more on the website www.rubbertank.co.br



Our winter pasture strategy that consists of seeding pasture after soy cropping isn't working as expected because there weren't enough rain to increase and develop the pasture. Last week we had a little more rain and we will observe this area to decide about reseeding it. I hope we don't need to do this service again.

What's on My Plate

- Budget plan for next cattle crop (profits and expenses)
- Preparing for weaning calves season
- Selling calves season (\$\$\$)
- Renovating employees' houses

Looking Ahead

Now that we have a water system in the farm, it's time to crop pasture in smaller areas in order to increase our cattle production. So, we need to hire a specific employee to do it before the end of the year. We are also planning to seed pasture on an old area to produce more beef cattle. Besides this area, we need to fertilize other areas and buy some heifers to improve our profit in the next crop. The higher prices of fertilizer will directly influence this decision. Maybe it won't be possible to do it.



Figure 2 Calves: 120 days of age - 250 kg weight

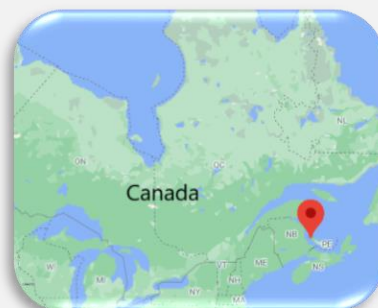
Key Activities Over Next 6 Months

People	Operational	Strategic
<ul style="list-style-type: none"> • Staff reviews and training • Feedback meeting 	<ul style="list-style-type: none"> • Weaning calves • Cow Management • Crop pasture in smaller areas 	<ul style="list-style-type: none"> • Buy some heifers •

Canada (Prince Edward Island)



**Morgan
 Smallman**
 Knutsford,
 Prince Edward Island



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Farm Overview

Climate	Farm Area	Arable	Livestock	Soils
Average rainfall 885mm	1600 acres (647 hectares)	Potatoes Sudan Sorghum	None	Sandy - Clay Loam
Average snowfall 285cm		Alfalfa		
Temperature range: 30°C to -25°C				

Seasonal Challenges

Our family has been on this piece of land since the early 1800's. I'm the sixth generation to farm. I am married to my beautiful wife Karissa, and we have 4 children: Cameron, Madeline, Cody, and Kylee!

Since the last update back in the fall of 2021, we have moved 75% of our stored potato crop to the processing plant. Currently we are holding around 30,000 cwt in our storage and waiting for the call to start moving that. We have been cleaning the bins in our storage and prepping them for the seed coming for the 2022 planting season.

We don't have any cooling capabilities in our storages; so, we move in some snow to help control the temperatures. We have used this technique for the last number of years, and it helps keep the sprouting down on the seed resulting in a stronger seed piece.

After coming off a really great growing season with an excellent quality crop, in November we lost a number of markets when the United States stop receiving PEI Potatoes. It has been a tough year for a lot of growers on PEI, and our farm has been very fortunate to move as much of our crop as we have, but there are some growers here who won't be able to sell any of their crop due to new restrictions put in place by the Canadian Food Inspection Agency. This turmoil is a result of finding a potato that was infected with "Potato Wart" which is a fungus that attacks the appearance of the potato. It is not harmful, but it can be spread through soil, which is the reason for the halt in the export of PEI Potatoes. It has caused a serious ripple in the potato industry here on PEI, and I would expect that the results will be felt for some time.



Our shop hasn't been overly busy this winter, we mostly pick a project or two to work on throughout the winter months to keep the crew busy. With our shipping starting in early November and taking us into mid-February, we didn't get to jump into too many big jobs. Seasonal maintenance getting trucks ready to haul seed, and now we are starting to pull some of the equipment out since the weather is warming. The winter weather was a little more on the mild side compared to usual. Don't get me wrong - we had some cold days, but there seemed to be a number of freeze-thaw cycles. This is a bit of concern as the ground was still frozen for these periods and we rely on some of our snowmelt to help replenish the ground water here on PEI. Hoping for an optimal growing season with adequate rainfall to support our crops.

On the transport side of our operation, we have been busy moving new Trout River Trailers around the Atlantic Provinces, as well as moving bulk potatoes and grains for other local growers. We are working on our trucks and trailers to get them ready for the upcoming busy season of hauling seed and agricultural inputs such as lime, potash, gypsum and calcium filler. Most of these inputs are sourced here in the maritime provinces of New Brunswick and Nova Scotia which makes it nice for our drivers to ensure they have some home time during this busy season. Bulk potato seed will start to move very soon, and our trucks will be in high demand for a few weeks until everything is where it needs to be.

Looking ahead to this planting season, our diesel costs have increased by 40 % and fertilizer costs are expected to be over 75% more than last year. We are also looking at more cost-effective ways to utilize our fertilizers. We have been using slow-release nitrogen products for some time now, but we are looking at more effective ways to apply some of our other nutrients such as in season foliars and

side dressing calcium. Moving forward we may look at more of these practices and make them part of our standard practice.

With all the challenges and issues surrounding our industry right now, we are thankful to be a small family farm - the support we receive from our families has been very important. We work together but at the end of the week we also play together, and that helps keep some of the stress that a week of work can sometimes put on. We enjoyed many outings to the woods this winter with campfire cookouts, star gazing and lots of card games to help us refresh and be ready for the next week at the farm.



What's on My Plate

- Preparing fertility program for 2022 crop
- Equipment maintenance and repairs for spring (Planter, Tractors, Tillage Equipment, etc.)
- Maintain winter potato storages (temperatures, humidity etc.)
- Wash, grade, and ship out remaining 2021 potato crop
- Set out our plot trials for new products/technology we are interested in
- Weekly management meetings and forward planning
- Sourcing agricultural inputs for crop protection
- Nutrient management plans for 4R (right source, right rate, right time, right place)

Looking Ahead

Working on securing our inputs ahead of time is going to be important. We have been fortunate here to call our suppliers and be able to get products pretty fast, but with low production and high demands, planning is going to be very important. Applying this forward thinking to the management side of the farm will also be beneficial and we are working with our advisors to help make these changes.



Key Activities Over Next 6 Months

People	Operational	Strategic
<ul style="list-style-type: none">• Continue to meet with our team to ensure a prosperous season.	<ul style="list-style-type: none">• Prepare equipment for planting• Maintain potato storages	<ul style="list-style-type: none">• Review farm financials• Review goals for spring season

Kenya (Kakamega)



Andrew Makatiana
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Farm Overview

Climate	Farm Area	Livestock	Soils
Kakamega, town, southwestern Kenya, located at an elevation of about 5,100 feet (1,550 meters) above sea level. Average temperature: 20.8 °C / 69.4 °F. Precipitation is about 1742 mm 68.6 inch annually.	One acre 1/4-acre hosting brooding and slaughter facility.	Improved Indigenous Chicken.	Largely sandy loam soils N/A

Seasonal Challenges

- 2021 is a year that has been a year full of challenge and success in equal measure. The first and second quarter was characterized by low sales due to the Covid - 19 pandemic. Covid-19 pandemic brought about protocols and restrictions that inhibited the normal running of activities in the hospitality industry the biggest drivers for product demand.
- Feed price fluctuations and shortages. Sorted through the bulk purchase.
- Access to quality Vaccines
- Delayed payment from corporate clients which in turn affects the health of cash flow.

What's on My Plate

- Completion of a modern Chicken slaughter and processing facility with a capability 1,000 birds in 8 hour shift and 2000 birds in a 24hr shift complete with waste management system.



Figure 3 'Chicken Slaughter and Processing' packaging facility

- Partner with development partners whose agenda is to empower chicken farmers so that farmers can access market, access out grower services through this partnerships project sustainability is assured beyond the development partner project.
- Complete trademark registration for products such as processed chicken, processed organic manure from chicken waste.

Looking Ahead

- Looking ahead, Lianfam Africa Limited will start processing chicken and offering bulk chicken slaughter services beginning 2022.
- Lianfam intends to install a chicken feather meal machine to enjoy food circularity benefits. A lot of money is lost from the economy due to waste not being converted to useful products that generate income but above all reduce greenhouse emission.





Key Activities Over Next 6 Months

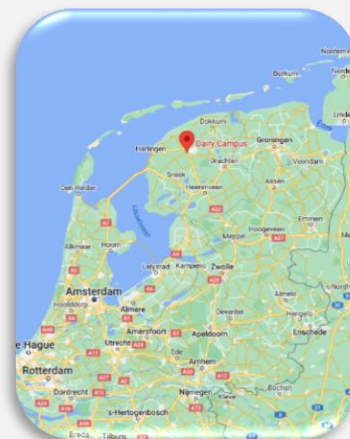
People	Operational	Strategic
<ul style="list-style-type: none"> • Increase youth, women and PWDs employment opportunities in the company • Train and mentor women and youth and PWDs in areas of agribusiness and commercial 	<ul style="list-style-type: none"> • Harness production systems to ensure continuous chicken production as raw material for the poultry processing. 	<ul style="list-style-type: none"> • Increase market presence for local chicken improved indigenous chicken • Increase Improved indigenous chicken population by contracting farmers into

The Netherlands (Friesland)



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Wytogard

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Farm Overview

Farm	Farm Area	Arable	Livestock	Soils
Wageningen Livestock Research Dairy Campus	256ha Grassland	64 ha Corn	500 Dairy	100% Clay
Jongbloed Dairy	80ha Grassland		150 Dairy Cows 70 Youngstock 30 Sheep	100% Clay

Seasonal Challenges

Wageningen Livestock Research – Dairy Campus:

Dairy Campus is part of Wageningen University and Research and is the research and innovation center of dairy farming in The Netherlands. Dairy Campus is situated nearby the city Leeuwarden in the north of The Netherlands. Dairy Campus has 500 dairy cows, housed in 7 different barns, every barn is equipped and designed for specific research aims. For example, the feeding barn and the environmental barn. In average 30 research and innovation studies will be performed per year. Next to the fact that the cows at Dairy Campus produce data for the research, they off course also produce milk. The year production is about 9500 kg milk with a fat percentage of 4.64 and a protein percentage of 3.55.

The diversity of the possibilities at Dairy Campus brings different facets together of research, business, and education to work strongly together towards a sustainable dairy chain for now and the next generation.

The unique concept of strong collaboration between research, innovation and education creates an inspiring environment to be part of. I'm proud that I can contribute and work at this unique dairy facility.

Jongbloed Dairy

My family-in-law owns a farm in the village we live in. We often work on this farm when there's a lot of activity during summer, for example harvesting. My father-in-law and 2 brothers-in-law are working fulltime on the farm. My partner and I both have our own job next to the farm. The farm is also based in the province Friesland which lies in the northern part of the Netherlands.

This farm has been in the family for over 100 years, and we are the 4th generation. The farm consists of 80 ha grassland in total. We milk 150 cows, which have an average production of 9600 kg milk with a fat percentage of 4.60 and a protein percentage of 3.70.

All work during summer such as fertilizing, mowing the grass, and making silage is done by ourselves.

On the farm we milk mainly Holstein cows. At this moment we are crossing this Holstein cows with other breeds which are Norwegian Red, Jersey, Fleckvieh, Montbelliarde and Brown Swiss. From the last 2 breeds we haven't got calves yet.

The reason why we started in crossing with other breeds is that in our opinion the Holstein cows have got a lot of problems with inbreeding. Effecting health and fertility.

During summer all milking cows are grazing in the meadows (of pastures) during daytime. We also feed them corn and silage. At this moment we are summer feeding (fresh grass) barn so the cows will eat higher quality grass with more energy and protein in it (more than silage). In the wintertime the cows are being held inside the barn all day long and will be feed with silage, corn, concentrate and some supplements.

What's on My Plate

Wageningen Livestock Research – Dairy Campus:

- Co-writing project plans and procedures
- Perform research activities (mainly focused on: Grassland Management, Biodiversity and Nutrition)
- Coordinating research from A to Z at Dairy Campus
- Collaboration with education (Universities of applied sciences)

Jongbloed Dairy:

- Feeding calves
- Assist the milking process
- Assist during harvesting

Looking Ahead

Wageningen Livestock Research – Dairy Campus:

- Contribute to research and projects for the ministry of agriculture in The Netherlands

- Extend my own knowledge about animal nutrition and farming systems
- Extend my network in (global) dairy farming.
- To reduce the gap between research an practical dairy farming

Jongbloed Dairy

- Reduce the gap between research and practical dairy farming
- To continue to enthuse my family-in-law to participate in projects for greater knowledge sharing

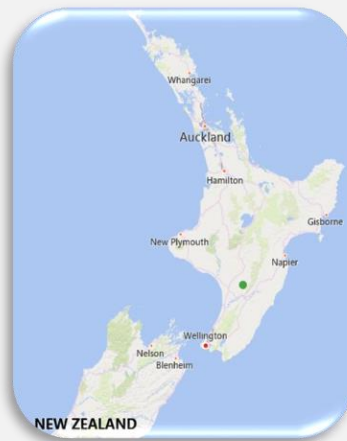
Key Activities Over Next 6 Months

People	Operational	Strategic
Wageningen Livestock Research – Dairy Campus		
<ul style="list-style-type: none"> • Train more people to perform the research work, due to the growing demand of all kinds of research • Continuing to train people to work with the already written (research)procedures. 	<ul style="list-style-type: none"> • To harvest next month enough roughage to be able to feed as much as possible silage produced from our own land, also with the right quality for doing research 	<ul style="list-style-type: none"> • Continue involving the existing and new network in the development of Dairy Campus (new innovations, new prospects)
Jongbloed Dairy		
<ul style="list-style-type: none"> • Farm take-over in May 	<ul style="list-style-type: none"> • To harvest next month enough roughage to be able to feed as much as possible silage produced from our own land. • To provide the cows with as much grass/products from our own land. So, we won't be needed to buy a lot of concentrate. To produce as much milk from fresh grass as possible • Breeding for outbred 	<ul style="list-style-type: none"> • To milk cows who are bred from a 3-way-cross • Continue high health status of the cows. • Our goal is to milk up to a 1.5 million kg milk with the 150 cows we have

New Zealand (North Island)



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Farm Overview

Climate	Farm Area	Arable	Livestock	Soils	Other
Rainfall 1200-1500mm annually Altitude 90-820m asl	1802 effective pastoral hectares 65 hectares of forestry 497 hectares of bush	Forage crops, 120 hectares spring sown, all fed in situ; re-grassing in Autumn and Spring	Sheep, Beef, and Deer breeding and finishing. Dairy, 2 split calving herds, one once-a-day milking	Free draining river flats, heavy clay, stoney soils, brown soils steep land soils and more.	Quality assurance schemes – milk lamb, beef, wool, venison, environmental

Seasonal Challenges

- We have now had two springs in a row that were both late to start and then had limited sunshine. The slow start to spring creates a pinch in feed supply right at lambing while the overcast days are not conducive to lamb growth. Throughout the lower north island most people were behind in weaning weights in lambs.
- We docked 139% for our lambs not including the hogget's. This is not our best lambing, but it is one of the better years. We are dropping ewe numbers by 300 ewes prior to winter this year to take the pressure off the early spring and let the remaining ewes perform. We will still aim to lamb some hogget's but only those that have met 65% of their mature weight.
- Lamb sales have been going well with 3,711 sold to date averaging \$138/head across all sales both prime and store stock.



- The farm gate prices for prime beef is \$5.90/kg CW* and for lamb it is \$8.30/kg CW*. This time of year historically, is when the schedule is at its lowest for beef and lamb. However, beef is above its 5-year average by about 50cents/kg CW and lamb is well up by 175 cents/kg CW. Our farm gate venison price has improved and is now witting at (\$7.95/kg CW*), this is sitting just under the the 5-year average. The forecast milk price is \$9.30 to \$9.90 per kg/MS. This is an exceptionally good price. (*Prices as of the 28th of March 2022. Taken from the Farmers Weekly and Fonterra website.*)

- We had good rain just before christmas which was welcome for pasture growth but unfortunately it was right as we were weaning lambs. This did create some challenges. We

then had little rain for around six weeks where we were starting to get Quite dry. In the first half of February we got 172mm. This set us up very well for the rest of the summer.

- Half of the ewes and all of the lambs were short in January. The second half of the ewes were shorn in March. The shearers brought Covid with them onto the farm. So far only one employee has tested positive.

What's on My Plate

- The stags are starting to roar as mating begins with the deer.
- The ewes are almost two weeks away from the ram going out, so they are currently a priority stock.
- The autumn calving dairy herds have almost finished calving
- We are still drafting prime lambs and aiming to sell around 100-200 every fortnight. It would be nice to have all trade lambs off pasture at the bottom of the farm before Autumn calves come onto the property. We will still have good lamb finishing crops available for finishing lambs into winter.
- At a rare quiet time on the farm, we are trying to catch up with maintenance. The bottom sheep yards have had a good upgrade. As well as some fencing upgrades.
- Cultivation and sowing of summer feed crops back into pasture across all blocks.



Looking Ahead

- I have recently completed a Kellogg Rural Leaders course so I will be looking to put what I have learnt into practice.
- Rising input costs as well as sourcing products and machinery is starting to become quite an issue, so we are trying to plan and provide a lot of lead in time for suppliers to source what we need.
- The seed crop industry in New Zealand has had a rough time this year with unfavourable growing conditions and extreme weather events ruining crops. There is the potential for a shortage in supply of seeds next spring.
- The partnership that owns our finishing block now has an end date, so we are looking for more land. Finding a block or not will affect what we do with the recently born Autumn calves.
- We have one small wetland project we are hoping to get the groundwork completed for before winter. This is being done in conjunction with other sites over the next couple of years.
- A prewinter feed budget and crop measurements will need to be done. We are fully stocked with supplement after good growth in late spring and summer.

Key Activities Over Next 6 Months

People	Operational	Strategic
<ul style="list-style-type: none"> • Managing covid around staff. • Ensuring people get some time off. • Training in tech used. 	<ul style="list-style-type: none"> • Managing feed into and during the winter. • Get trade animals finished or sold prior to winter. 	<ul style="list-style-type: none"> • Find a replacement block of land for finishing cattle. • Continue modelling carbon and environmental metrics. • Modelling of winter feed management and scenarios.

New Zealand (South Island)



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Farm Overview

Climate	Farm Area	Arable	Livestock	Soils
Balfour (Southland)– 250masl, Temperate climate, 1200mm annual rainfall Wet winters and often at a moisture deficit for a month somewhere in Jan, Feb, Mar.	Balfour – 490ha total, 460 ha effective Balfour contour – flat and rolling hill country. Some steeper parts but can get tractor over 95%	Balfour - 75ha winter forage crops 15ha summer/autumn forage crops	Balfour – 1300 stud breeding hinds, 500 R2 and R3 stud stags, 1200 MS R1 deer, 65 Angus Breeding cows and calves, 28 R1 heifer replacements	Balfour - Heavy clay soils, underlying rotten rock which can be exposed on hills where shallower soil.
South Canterbury – 200-300masl, 800mm annual rainfall, generally considered summer dry for 2-3 months	South Canterbury, Total 800ha, 650 ha effective grazing, 130ha of forestry South Canterbury contour – 180 ha of flat land which is irrigated, rest rolling to steep hill country. Can get a tractor over 90% in some capacity.	South Canterbury – 85ha winter forage crop, 25ha summer/autumn forage crop	South Canterbury – 1450 breeding hinds wintered; 2300 breeding hinds mated with surplus sold as breeding stock. 3500 MS R1 deer wintered, 70 Sire stags, 200 Angus Breeding cows and calves, 190 R1 cattle inc replacement heifers, 50 ewes	South Canterbury – 150ha alluvial river flats, (mostly irrigated), Rest heavy clay from flat to steep hill.

Seasonal Challenges

In Canterbury this season it has been extremely wet for the most part. This has meant plenty of feed, but stock isn't always doing well. The specialist finishing crops we have of predominantly red clover have outperformed normal pastures by a long way.

The weather has meant less irrigation (3 weeks vs 4-5 months) which has been great from a workload perspective. Conversely though it has been challenging to get windows with the right ground conditions to get crops and pastures in the ground on time. Also, although some of the crops have established well, they haven't survived or thrived due to sodden ground conditions.

Due to the weather and therefore feed conditions, we have been able to make a lot more supplementary feed while carrying more stock also. We will also be able to carry a lot higher pasture covers into the winter than previous seasons too.

Southland has been an almost perfect season until the last month. Admittedly we have been in a little oasis compared to the rest of the region, which has been pretty dry most of the season. Usually, we are the drier area of the region. This has meant great pasture growth through summer which has meant we've lifted covers from a very slow start to spring and ended up making more supplement than we've made in the 5 years we've owned the property with a higher stocking rate. In the last 4 seasons we have been extremely wet in spring which has meant we haven't had windows to get new grass and winterfeed in the ground. Conversely this season we have got those windows meaning new grass and winterfeed crop were in the ground post winter 1-2 months earlier than the last few seasons. This has clearly flowed through to the current good feed situation too.

The winterfeed crops and supplement made on both farms are looking to be in surplus of where we have been in the past few seasons, this should mean an easier winter where we can focus on really feeding the animals as opposed to making everything last.

What's on My Plate

- Just finishing the breeding programme implementation at the deer stud in southland. This is the implementation of the feedback from farmers and projection of the animals we will be likely to sell in 3 years' time.
- Coordination of breeding programmes for clients, collection, and supply of appropriate semen to suit their breeding goals.
- Employing new staff in conjunction with operations managers
- Putting the new seasons plans into action. Rolling with the weather and monitoring stocking options to earn extra \$. We are in the process of stocking up for winter with weaner deer. This is building relationships and trying to source the right weight and genetic makeup animals for our targeted kill profile next spring.

- Implementation of the development plan at Stanton (lease block) continuing to adapt it as things change. Luckily, we had a lot of the materials locked in on pricing with the current inflationary environment.
- Modelling how the development progress will affect next years required stock balance.
- In the next month I will be reassessing this year’s financial performance and starting to predict what next season may look like.
- Implementing new communication strategy for the stud operation.
- Promoting our in calf hind sale that will occur in July
- Continuing to evaluate and tweak our farming system to become more resilient and profitable.

Looking Ahead

Working on creating a more resilient system, where we can lower costs as necessary to be able to survive the poorer years and take advantage in the better years. Also looking to reallocate our personal and financial capital for its best use.

Making sure the new system with lease farm fits this and we have the right people involved to implement it.

Constantly improving and changing the way that the farm system works to squeeze more out of it with less cost and effort. Also, to adapt to the climatic challenges and ever-changing environmental expectations and regulations.

Key Activities Over Next 6 Months

People	Operational	Strategic
<ul style="list-style-type: none"> • Getting new staff on board with new challenges and changes with the new lease property • Recruiting the appropriate staff to fit the team culture and skill base going forward with the new lease property • Ongoing reviews and training. 	<ul style="list-style-type: none"> • Implementing the last of our kill programme so we can best take advantage of all the stock classes and feed situation working around covid killing restrictions • Integrating the new farm into the farming system • Sourcing the appropriate young deer as trading animals to implement next seasons plan. 	<ul style="list-style-type: none"> • Balance of stock numbers and classes between species and the changes of this with new property • Implementing sales strategy for this season • System analysis to be profitable • Obtaining consent to farm to secure future flexibility on both properties

- On-going rotation and recruitment of new staff
- Balancing stock numbers for the winter with trading vs capital stock. Also balance across sheep, cattle, and deer.
- Making the most of the opportunities from the stock that we have on hand currently vs trading in and out
- Further cementing relationships for inputs and products
- Growing business while venison market subdued
- Targeting key staff to get on board and bring into the ownership of business, so everyone is working towards a common cause.
- Working out how to keep a lid on costs with all the current inflationary pressures.

Slovenia



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Farm Overview

Climate	Farm Area	Arable	Livestock	Soils
Rainfall 1200 mm	Grassland 20 ha	Maize, Barley, Wheat, Clover grass mixture,	99 head of cattle: 54 dairy cows	Loamy soil, Clay soil
Altitude of the farm: 386 m	Arable: 20 ha Total: 40 ha	Fodder beans, Garlic	(Holstein-Friesian, Brown breed), 55 young stock. Raising and rearing breeding animals.	

Seasonal Challenges

Simon Čretnik is owner of the family farm Čretnik. His farm cultivates 40 hectares of land and has 99 head of cattle in new barn (54 dairy cows & 55 young stock). On this farm only Simon and his mother are employed, while his wife is employed as nurse in hospital and his father is already retired. Due to the mechanization of the barn, which reduces work, other family members only help on the farm.



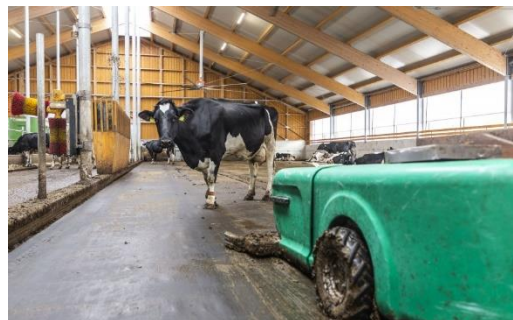
In May 2020 they start to build new very innovative animal and environmentally friendly barn for cows and young stock with high welfare floor (permeable floor), which was ready in spring 2021. Their farm is one of the first farm in the world to have barn without cubicles with animal welfare floor which is also environmentally friendly. Walking and lying area for dairy cows on this farm has so called permeable artificial floors composed of



different layers. On top is a special drainage fabric that lets urine pass through and keeps faces above the floor. A mattress under the top layer is soft enough for the cows to walk on but hard enough for a manure robot to scrape the faces. Boxes on the bottom of the floor construction collect the urine, and pipes underneath transport it to a storage system. Separation of urine help to reduce ammonia emissions. By separating faces and urine

already on the surface, they are expected to reduce the amount of ammonia by up to 80 percent. Maintaining a dry area where cows spend their time is also beneficial for their hooves and udders. The floor is made of artificial material, which in a sense gives the cows the feeling of being on pasture.

Simon Čretnik got idea for such innovative housing system during study tour of Slovenian farmers in the Netherlands, where versions of such barn floors are being tested at the Dairy Campus of Wageningen University & Research. Simon decided on this floor surface mainly because of the desire to provide comfort to his dairy cows. Each cow in their barn has 15 square meters of lying area, and additionally other areas are also available to them. This way - comparable to pasture - they can lie down wherever they want.



"We opted for a housing system that offers the benefits of grazing and the benefits of in-door housing system, such as insect control and ventilation. It is also a compromise between environmental awareness and maintaining production".

What's on My Plate

- To have 55 dairy cows with average milk production over 12.000 kg milk per year
- Life production of his cows over 50.000 kg milk (excellent longevity)
- Healthy family members, animals, plants, and soils
- Recognition of an acceptable housing system also among consumers / society
- Favorable ratio between input costs and output prices
- Generate enough income to cover all costs, pay off loans and further develop the farm

Looking Ahead

Their goal is

- to have 100 heads of cattle

- to reduce ammonia and GHG emissions with breeding, feeding, using of additives for manure (from young stock), distribution of manure (special mechanization) – to practice high standards related to welfare and environmentally friendly housing system
- to be involved as pilot / case / demonstration farm in different research activities on national and international level
- to be “an open-door farm” for children, students, young farmers, other farmers, other stakeholders, and consumers



Key Activities Over Next 6 Months

People	Operational	Strategic
To organize work plan in efficient way	Maize planting	Planning to buy some new mechanization for harvesting of grass
To have time for many visitors on the farm	Mowing and harvesting fodder in optimal weather situation to get high quality grass silage	Arrangement of a new access road to the barn
To look around for new things / new innovations	Wheat and Barley harvesting in July – most of this production will be used on the farm	
	Daily work with dairy cows and young stock	
	Daily monitoring of data from Fullwood milking robot and sensors	

United Kingdom (Northumberland)



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Farm Overview

Climate	Farm Area	Arable	Livestock	Soils	Other
Rainfall 600mm – 700mm	Grassland: 500ha	Wheat	Dairy Herd	Ex open cast	Farm Shop,
Temperature range 2 -20 deg.C	Arable: 1,800ha	Oilseed Rape	Suckler Cows	Poorly structured soils	Open Cast Coal,
	Woodland: 100ha	Barley	Beef		White Park Cattle,
		Field Beans	Turkeys		Commercial grain store
		Small Scale Veg	Laying hens		

Seasonal Challenges

We have had a relatively kind winter this year, very few frosts and no snow! It was also quite a dry winter which has allowed us to get on with some early organic matter spreading and spring drilling.

Back in December we killed about 600 turkeys to sell through the Farm Shop. It is not the most pleasant of jobs on the farm, but it is good use of labour during the quitter times of the year and does make a good profit.

The winter wheat has enjoyed the milder and drier winter and is looking good heading in to the spring. We have already applied about 100kg/ha N on the wheat and will apply another 100kg/ha N by mid-April. With our direct drilling system, we do suffer from suffer grass weed issues, especially brome grass. To combat this, we apply a quite a robust application of contact herbicide which costs about £46/ha. Over the course of the spring the wheat will get a further 4 applications of fungicide and growth regulator. In total the spray cost will be around £240-260/ha.

The OSR established very well in the autumn, I think this was down to applying cattle slurry and bio-solids before drilling the crop which gave it a good early boost. We applied herbicide in the winter which has done a very good job therefore won't have to top up in the spring. Nitrogen varies across the farm, but some good forward crops will just receive around 80kg/ha N whilst backward crops will receive around 180kg/ha N.

Spring beans have been drilled. The hope is to use these as a home-grown protein source for the cattle next year instead of buying in soya. The use of soya is quite a hot topic here at the moment and milk buyers have hinted that they want farmers to reduce and maybe stop using soya in the future.



Figure 1 Oilseed Rape

We grow spring malting barley on contract for MSP. It has all been drilled in good time with plenty of moisture in the soil so fingers crossed it will establish well.

It will be especially interesting to read the other reports this time and find out if prices are similar across the world and how people will deal with this. As I write this wheat is £326/t, oilseed rape is £810/t and 34.5% Nitrogen is over £900/t. Diesel prices are also high at £1.28/L, this is usually between £0.60 and £0.70/L. All very crazy and slightly worrying however with our drilling system and better use of organic matters I feel we are in a good position to take advantage of the high output prices whilst lowering our input costs as much as possible.

At the dairy we have a new herdsman who started in March. So far, he seems to be fitting in well. Milk price has just gone up to £0.39/lit but feed prices have increased dramatically along with energy



Figure 2 Belted Galloway

costs. The slurry which was almost considered a waste product from the dairy is now vital part of the arable system with the rise in fertiliser prices. We are yielding around 26L per day. We do struggle with fertility and currently focusing on why this is. One theory is lameness which we are curing with more foot bathing and lifting problem feet. Another issue is the concrete floor has become 'slippy' and needs re-grooving. The cows often don't feel confident to show signs of bulling and we therefore miss them.

We are splitting the belted Galloway suckler herd so that we have a better supply of beef all year round for the farm shop. The cows are due to calve in April. Beef prices is still good at around £4/kg. We have purchased some 'Nofence' geo fencing collars for some of the Galloway stores so that we can better manage some of the

conservation grazing on the farm. They seem to take a bit of getting used to and will hopefully be a good tool to increase grazing efficiency.

What's on My Plate

- Spring herbicide and fungicides to apply
- Work with new staff in the dairy
- Find staff for summer workload
- Spring cover crop drilling.



Figure 3 White Park Cattle

Looking Ahead

- Assess the challenges of rising input prices.
- Carry out a carbon audit on the farm and possibly look at selling our beef as “low carbon” or “carbon neutral.
- Farm board meetings to attend.

Key Activities Over Next 6 Months

People	Operational	Strategic
<ul style="list-style-type: none"> • Help new staff settle • Staff pay rises 	<ul style="list-style-type: none"> • Carry out spring work • Plan for harvest 	<ul style="list-style-type: none"> • Look to forward sell grain to make the most of high grain prices. • Assess longer term futures prices to help plan for higher input prices and possibly sell grain for harvest 23.

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