

Sustainability
Benchmarking
Report 2019



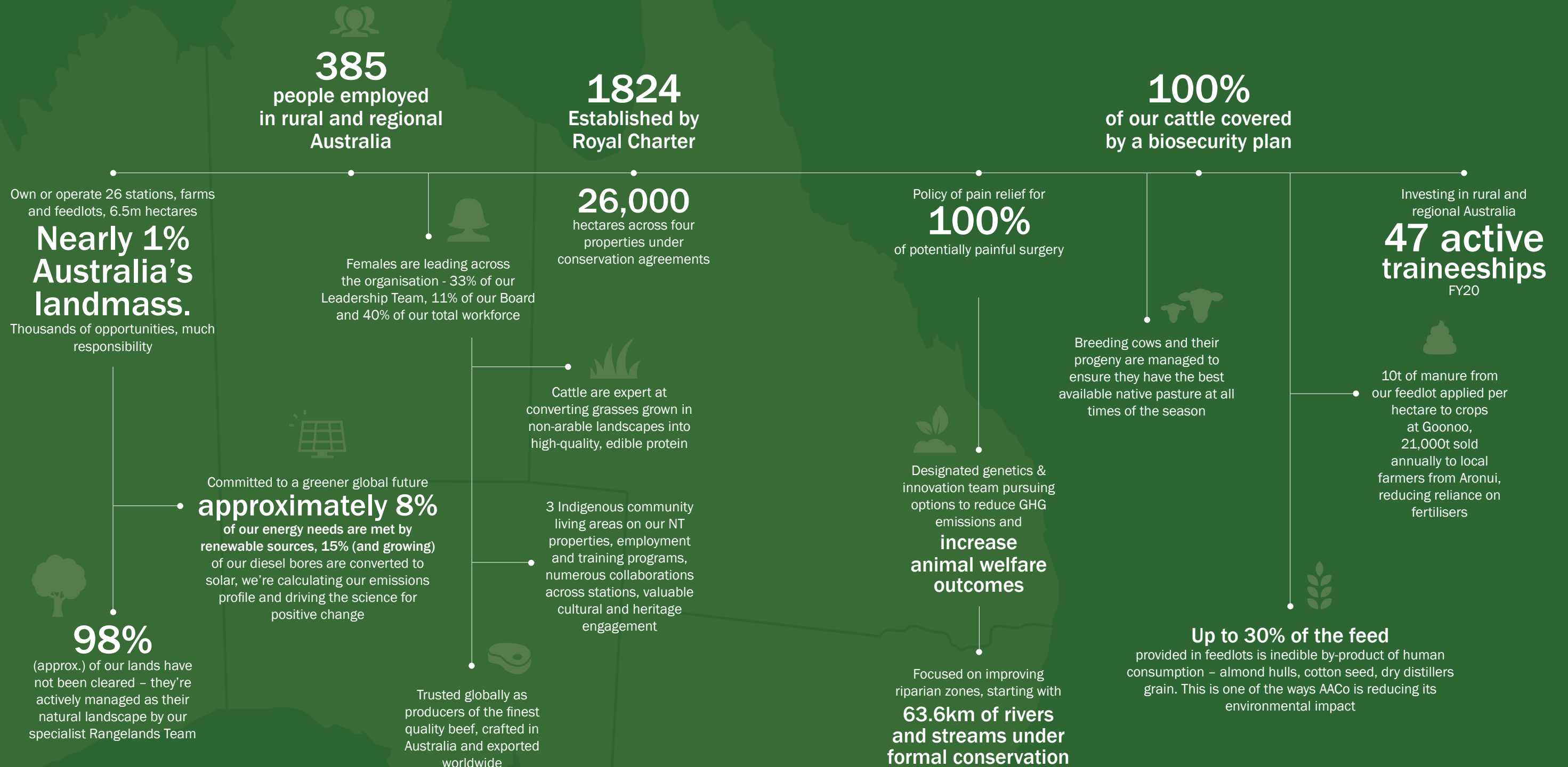


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We've been here for a while,

& this is where we are now.





But it's no longer enough,
& we're pretty keen
to hang around

For almost 200 years, the Australian Agricultural Company has been shaped by the Australian continent.

Today we are stewards of a remarkable legacy.

As one of Australia's biggest beef producers, we want to lead the way forward for Australia's agricultural industry as we make some big changes to how things happen around here. The 'business as usual' model will no longer cut it.

We are driving change across our business, bringing together a range of voices and are committed to sustainable beef production. We'll work with industry and experts to push the boundaries to enhance

our soil quality, optimise our water use, provide the best care for our cattle, reduce our greenhouse gas emissions and pursue the best science for reducing our impact on the planet.

Sustainability isn't a goal, it's an attitude. It's our way of life. It's critical for our legacy to survive and it makes business sense. We are aware that raising premium beef cattle has to come with a commitment to the lands we operate on. The better we've looked after our lands historically and today, the better they'll perform in the future.

True sustainable practice delivers on environmental, social and economic outcomes in balance, and for our industry is extended to include animal welfare. Sustainability is the ability to meet our goals while at the same time sustaining the ability of natural systems to provide the natural resources and ecosystem services upon which the environment, economy and society depend.

So that is why we have written this report. It's our way of communicating to you, our stakeholders, what we're doing at AACo to ensure that we can all continue to enjoy premium Australian beef now, and into the future.



A message from *Hugh Killen*

The year 2020 has commenced with an unprecedented start. Australia firstly faced tragic bushfires that devastated many farmers and producers. The COVID-19 pandemic then took hold, with an incredible impact on lives, health systems, economies and markets.

AACo is taking the opportunity to examine everything we do as a company to ensure we're best positioned to meet the challenges and opportunities ahead. These events, on the back of two years of drought and the North Queensland floods, have served as a not so gentle reminder of the importance of applying a sustainability lens across our company and the supply chains that support it, to ensure we are a company that thrives into the future. Sustainability's position as a core pillar of our business remains strong.

At AACo, we're working with our local community to aid in the response to the virus. This event has allowed us to really assess what 'community' means to us, and we have confirmed just how broadly it extends and how strong ours is. On the stations where our story begins, the importance of the 'station family' has been highlighted, as many of our people are isolated from their own family members as they support the biosecurity of our operations. The more vulnerable local Indigenous communities we share our lands with have been front of mind as we negotiate these biosecurity plans. We have relied heavily on the local communities that support our operations - the truck drivers who are crossing borders to

keep our supply chain running smoothly, the local service providers who have been flexible to keep assisting us, the governments that have been resourceful and supportive to ensure we can remain operational and safe. Our global community of employees, chefs, families and distributors has been united by this pandemic as we navigate a path forward, together.

Globally we are seeing red meat consumption increase significantly and a stronger connection developing between the consumer and producer with a focus on secure supply chains. The industry, united, is rallying to keep up with this demand, as Australian beef is relied upon both locally and globally as a high quality, sustainable and healthy protein.

This is our Sustainability Benchmarking Report, which commits us to emerging from this pandemic stronger, more resilient and better prepared for the future. COVID-19 has highlighted the importance of producing high-quality food that nourishes and comes from lands and animals which are healthy, replenished and can continue to thrive into the future.

Our commitment to sustainable beef production began long ago. We've been living and working on the land since 1824, and taking good care of it. To us, producing sustainably has always been about caring for the land, our people and our animals today in a way that will see them excel tomorrow. Continuing this approach day after day, year after year, is how we've come to be the

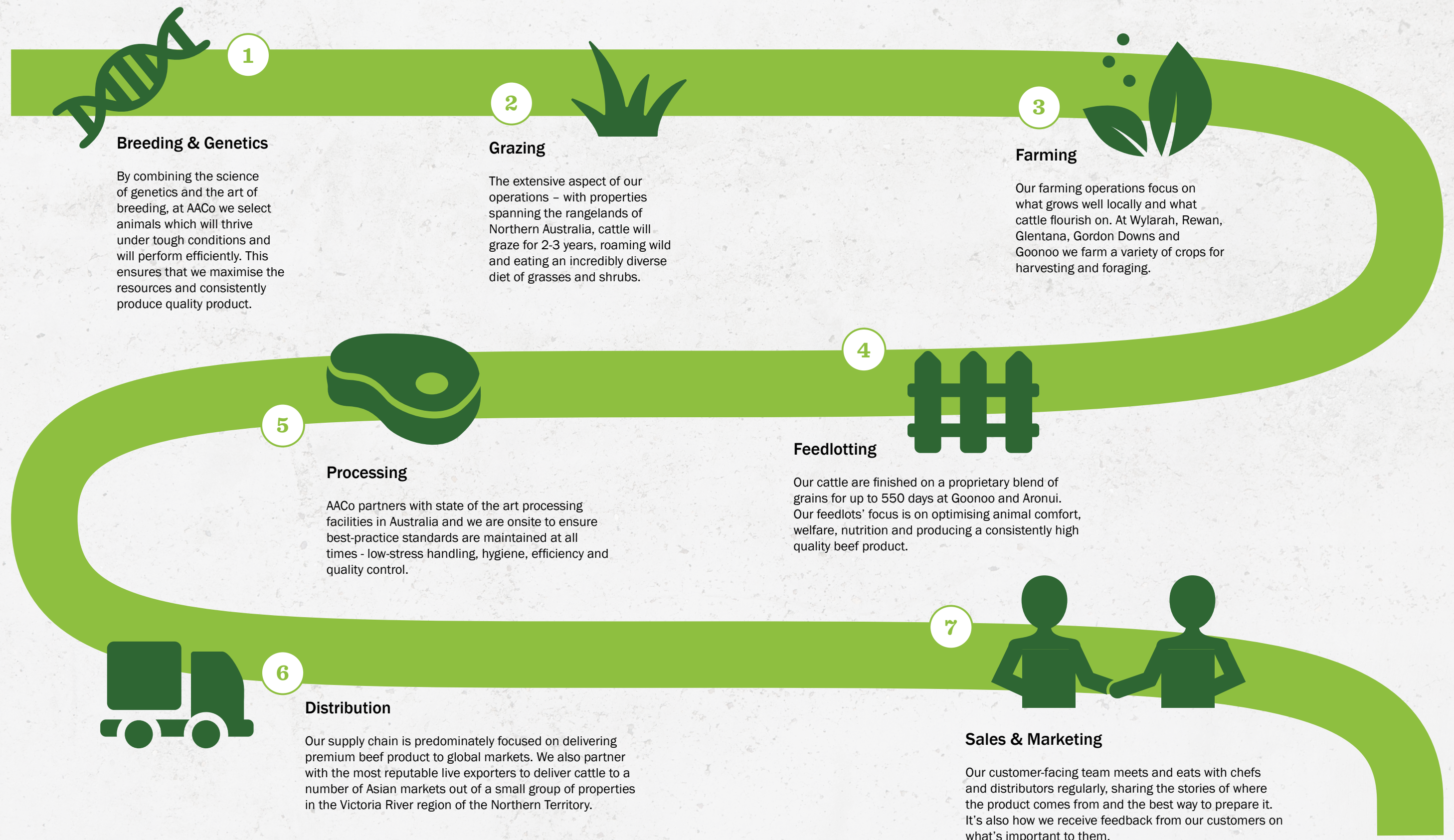
oldest continuously running company in Australia - if that doesn't indicate a sustainable approach I don't know what does.

Sustainability is not about a quick fix, such as offsetting our emissions. We can't change our footprint overnight - that disregards everything we know about maintaining our land as custodians for future generations. We want to be innovative, creative, adaptive and balanced along our sustainability journey.

Our lands cover a lot of Australia, which we see as an opportunity. It allows us to be creative with our land management techniques and move cattle to avoid overgrazing and degradation. It allows us to be innovative with water storage and conservation, returning value to the land. It also allows us the flexibility and resilience to bounce back when these challenging times hit. We're learning from these experiences and are keen to share our story of resilience building. We invite you to join our journey, learn with us as we succeed and as we encounter challenges. Provide feedback, seek counsel. Because it is only when we act together, united, that we can really start to make a change in how sustainable beef production in Australia is achieved. To be part of our journey, please contact sustainability@aacocom.au.


Hugh Killen
Managing Director & CEO

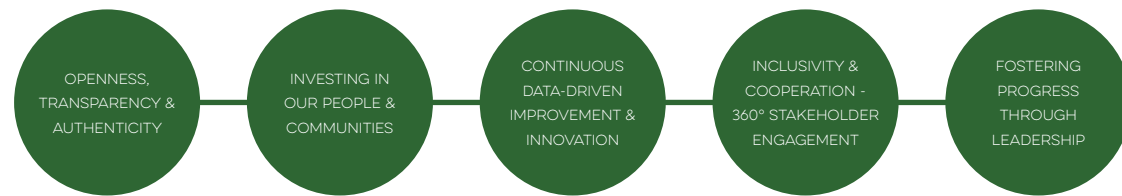
Supply Chain



Finding Our Baseline

In January 2019 we released our Sustainability Policy. This was the first time we put down in words the policy we've been operating on for almost 200 years. We also developed our Sustainability Framework, a whole of operations assessment which helps us to understand exactly where we're at against a number of key metrics. These metrics are guided by a commitment to five key principles:

Five Key Principles



These key principles encapsulate our approach to operating.

For us, it's about improving the clarity and consistency of the information we're capturing about our performance, establishing a baseline and the setting of clear goals and metrics.

It's putting our people first – our operations are geographically diverse and in many cases isolated, spanning the world's largest intact tropical savanna in the Northern Territory and the rich and fertile floodplains in Northern Queensland. We will continue to ensure the safety of our people is a key priority, while ensuring they are inspired, fulfilled and socially connected. Our sense of 'community' is all-encompassing; from our station hands and the rural towns supporting our properties to our international customer base, and we want to ensure community-wide strong and positive relationships that are based on mutual respect of each other's business.

Part of this sustainability journey must include understanding what innovative solutions are being developed in the sector and we will continue to invest time and resources in research and using this research to improve our methodology. This includes collaboration

with industry, customers, NGOs, government, regulators and academia, and taking a leadership role in progressing this agenda by sharing what we find.

The Red Meat Advisory Council, 'RMAC', is one of these industry collaborations. In June 2019, RMAC released its second 'Australian Beef Sustainability Annual Update', reporting against the Australian Beef Sustainability Framework, the 'ABSF'. The ABSF is the result of extensive research and stakeholder engagement that culminated in a set of metrics. We have used these metrics to inform this baselining report. We now have 17 metrics that are directly relevant to our operations and demonstrate our strengths and the opportunities for improvement. We are sharing our performance with you to be transparent about our strengths and our weaknesses and where we're up to on our sustainable beef journey.

As we progress along on our sustainability journey there may be changes to what metrics we report on as we develop our approach. We will aim to align ourselves to global reporting standards so that our metrics are relevant across our international customer base. We will set targets to aim towards. We will continue to reflect, scrutinise, learn and improve.

This report sets our baseline;

how we perform on a number of metrics, how we're aligning with the United Nations' Sustainable Development Goals and where we're at on our sustainable beef journey. There are a few stock takes along the way - parts of our operations we think it's important to highlight.

Our immediate plan for sustainable growth:

Now:

- We have published our Sustainability Policy
- We have released our Sustainability Benchmarking Report

Next:

- Align reporting with global standards
- Set a Science-Based Target for emission reductions
- Progress assurance in sustainability reporting

Enabling Projects:

- Actively pursuing science-based measures for reducing enteric emissions
- Resetting our supply chain to reduce reliance on road transport – prioritises animal welfare and reduces diesel reliance
- Increasing renewables in our energy mix
- Improving waste management processes
- Establishing an Animal Welfare Committee to drive best practice
- Replacing all windmills with solar bores for safety outcomes
- Engaging with industry experts and students to analyse practices and inform change

Maintain:

- Respect for what makes it possible (animals, people, land, resources)
- Aiming high

Alignment with UN Sustainable Development Goals

The United Nations Sustainable Development Goals ('SDGs') represent the world's plan of action for social inclusion, environmental sustainability and economic development. Throughout this report we have indicated our alignment to the Goals across our various focus areas. The table below demonstrates where our business impacts on the SDGs and where we are contributing to sustainability outcomes.

	<ul style="list-style-type: none"> Implementing responsible agricultural business best practices that do not violate land rights Supporting innovative solutions to address sustainable food security for a growing world population 		<ul style="list-style-type: none"> Avoiding prophylactic use of therapeutic antibiotics in herd Providing employees, families and broader community with access to healthcare services (counselling, physiotherapy, psychology & Royal Flying Doctor Service partnership)
	<ul style="list-style-type: none"> Reusing nearly 100% of rainfall that runs through the cattle pens at feedlots in irrigation Transitioning from turkey nests to tanks to reduce evaporation and improve water quality 		<ul style="list-style-type: none"> Increasing the proportion of renewable energy for homesteads and bore operation Reducing reliance on diesel
	<ul style="list-style-type: none"> Promoting agricultural careers and requiring people with a range of technical skills Investing in internships and dedicated training Promoting Indigenous engagement by establishing working partnerships 		<ul style="list-style-type: none"> Engaged in cross-sector partnerships to unlock investments in agriculture, infrastructure and technology Investing in physical infrastructure to support the development of agriculture and markets: water, technology/connectivity, roads and logistics Investing in social infrastructure to support rural workers
	<ul style="list-style-type: none"> Dedicated Skills Framework to enhance learning and skills development opportunities for all staff Traineeships to promote agricultural employment 		<ul style="list-style-type: none"> Opportunity to reduce packaging and increase recycling in production Efficient use of human byproducts in feed (cotton husk, almond hulls, distillers grain) Whole-of-animal approach to processing
	<ul style="list-style-type: none"> Developing more climate resilient agriculture (TCAs, forage budgeting, water storage optimisation) Enhanced natural disaster resilience by designing and implementing infrastructure following flooding events Measuring our emissions profile and preparing to set goals to reduce this 		<ul style="list-style-type: none"> Dedicated Rangelands Team Implementing sustainable land-use activities and not deforesting lands Learning how to better manage and maximise direct and indirect interactions with natural capital
	<ul style="list-style-type: none"> Participating in multi-stakeholder partnerships to share knowledge, expertise, technology and resources to promote the SDGs 		<p>In addressing 11 out of the 17 SDGs we are acknowledging there is always room for improvement.</p>



Our Focus Areas



1. Animal Health & Welfare

- Committed to animal welfare
- Healthy, happy cattle are completely integral to our economic sustainability
- Clear policies and training in place ensure best practice animal husbandry
- Our stations follow strict biosecurity policies and guidelines to ensure that our cattle live free of preventable diseases
- Expertise in animal handling is a source of professional pride for our people
- We commit to meet or exceed all benchmarks set under the Australian Animal Welfare Standards
- Focus on ensuring consistent application across all of our operations of the latest techniques and innovations
- Breeding to eliminate the need for some animal husbandry procedures



2. Environmental Stewardship

- As custodians of the land, we are committed to innovative, sustainable environmental management
- We have a dedicated Rangelands Team that is focused on ensuring that we manage our lands proactively to mitigate damage, overgrazing, erosion and weeds
- Quality beef production is dependent on a healthy environment
- Our diverse activities are managed with the aim of minimal impact on air, water, land, flora, fauna, and cultural heritage and values
- We have a responsibility, and a plan, to reduce our GHG footprint
- Best practice in known carbon abatement within our herd
- We must continue to strive for material improvements and support ongoing research, innovation and trials



3. People & Culture

- Our people are centric to our operations
- Our community is everything – on the station, in the adjacent towns, in our Brisbane and Sydney offices and internationally with our sales teams and customers
- We enforce the utmost in safety protocols across our operations
- Committed to ongoing training for all levels of staff
- Believe in the need for gender equality and cultural diversity for effective decision making
- Promotion and development across the organisation is achievable for all staff



4. Livestock Transport

- Priority area for AACo given the geographic spread of our operations
- Strict adherence to MLA's 'Welfare Standards for the Land Transport of Livestock' and 'Fit to Load' provisions
- Only partner with the most reputable accredited service providers whose animal welfare standards meet ours
- Continued advocacy and support for traceability and independent auditing for animals along the full length of the domestic and international supply chain

Setting the *Baseline*

The following table is AACo's baseline across 17 metrics which we have identified as relevant and important to measure and track, across our operations. We are in the process of setting specific goals for the journey ahead which we will share soon, but in the meantime we've indicated our directional goal relating to each metric.

	Metric	AACo Baseline ¹	AACo's Approach
Animal Welfare	Animals with poll gene	Approx. 25% herd	<ul style="list-style-type: none"> Dedicated genetics team tasked with breeding for polled animals Composite herd (50% of total herd) is approximately 50-60% polled All Composite cattle born in our Bull Breeding Unit will be polled from 2022 Breeding for the poll gene has commenced in the Wagyu herd, but has a longer timeframe as Wagyu are a naturally horned breed <p>Goal: Increase proportion of polled animals by continuing emphasis on breeding for poll gene</p>
	Use of pain relief for routine animal husbandry procedures	Policy of pain relief for 100% of potentially painful procedures	<ul style="list-style-type: none"> AACo's Pain Management Policy stipulates that all potentially painful surgical animal husbandry procedures, where deemed necessary to improve life-time benefits to cattle welfare or to reduce WHS risk, must employ the use of appropriate and effective analgesia ie dehorning/disbudding, male castration, female spaying <p>Goal: Maintain while working with R&D partners to develop more effective pain relief tools with a view to collaborate with industry for broader adoption of pain relief</p>
	Slaughtered by processor accredited by Animal Welfare Certification System (AAWCS)	100% of animals	<ul style="list-style-type: none"> All our processors are third parties and are AAWS accredited, all accreditation is updated annually AACo representatives are onsite during most processing Processors are subject to numerous audits by third parties to ensure compliance <p>Goal: Maintain and continue to monitor opportunities for improvement</p>
	Antibiotic Stewardship	Committed to minimal use of antibiotics in only essential cases	<ul style="list-style-type: none"> We do not engage in antibiotic prophylaxis of our herd Therapeutic antibiotics are used exclusively for treatment of sick animals/ on veterinary advice In severe weather circumstances (ie severe drought) we administer antibiotics for the young and vulnerable animals identified to be at increased risk Treatment received by each animal is logged on electronic ID tags Stringent adherence to APVMA withholding requirements after treatment <p>Goal: Maintain with enhanced reporting and documenting of procedures</p>
	Compliance with National Feedlot Accreditation Scheme animal welfare requirements	100% compliance	<ul style="list-style-type: none"> Independently audited annually Focus on adherence to five freedoms, food safety, livestock management, environmental management, product integrity <p>Goal: Maintain 100% compliance and monitor opportunities for continuous improvement</p>
Environmental Stewardship	Carbon emissions	Scope 1 & 2 FY19: 625,006t CO2-e	<ul style="list-style-type: none"> We will work with experts, the industry and scientists to reduce our total emissions and increase sequestration efforts, across our operations We will continue to develop research into breeding feed efficient animals to reduce enteric emissions We will set a Science Based Target to work towards <p>Goal: Reduce with ongoing R&D and implementation of opportunities in carbon abatement and reduction</p>
	Land managed for conservation	0.7% of NT properties set aside under TCAs; 3.3% of total portfolio excluded from grazing	<ul style="list-style-type: none"> AACo properties are almost exclusively (~90%) extensive savanna rangelands maintained in their natural state Territory Conservation Agreements (TCAs) are a 10-year commitment to protect areas of conservation importance, in partnership with Territory Natural Resource Management We endeavour to continue to work to identify areas of significance and manage these appropriately across the Northern Territory and Queensland <p>Goal: Increase efforts to identify areas of significance and manage these appropriately across the Northern Territory and Queensland</p>

	Metric	AACo Baseline	Notes
Environmental Stewardship	Changes in vegetation	10.6% forest gain 6.2% forest loss 10% woodland cover gain 4.7% woodland cover loss ²	<ul style="list-style-type: none"> This data is difficult to report with any degree of accuracy; we are working with industry leaders in satellite monitoring to assist in the verification of satellite imagery This data is about changes in vegetation and does not represent land clearing - changes in woodland and forest cover percentages are attributable to multiple sources (fire, drought, floods & weed control) Internal records estimate approximately 98% of lands have not been cleared by AACo or previous pastoralists Any land cleared or changes to management practices presents challenges and requires ongoing management of woody thickening (regrowth) to reduce encroachment on native vegetation and fuel for wildfires <p>Goal: Maintain the lands in their native state using management tools to help them thrive</p>
	Protection of waterways	63.6km of rivers and streams protected	<ul style="list-style-type: none"> We have five Territory Conservation Agreements driving protection of 63.6km of rivers and streams We will enhance riparian conservation efforts across our portfolio <p>Goal: Increase by enhancing riparian conservation efforts across our portfolio</p>
	Percentage of total energy requirements supplied by renewables	Approximately 8% of total energy requirements ³	<ul style="list-style-type: none"> Aim to progressively increase penetration of renewables into energy mix at stations - requires upgrading building thermal efficiencies and battery installation <p>Goal: Increase through innovation and investment</p>
	Percentage of bores powered by solar	15% of bores are solar powered	<ul style="list-style-type: none"> We are replacing all retiring diesel bore pumps (and their associated 'turkey nests' (dams)) with solar powered bores and tank systems Requires upgrading of piping and vessel infrastructure Significantly decreases evaporation and improves water quality <p>Goal: Increase through innovation and investment</p>
People & Culture	Training for the future	FY19 Traineeships Commenced: 40 Completed: 20 Ongoing: 14	<ul style="list-style-type: none"> AACo is committed to building a skilled and well-rounded labour force across our diverse operations <p>Goal: Increase through engagement, investment and planning</p>
	Female representation in the workforce	Farms/stations: 38% Feedlots: 35% All AACo: 40%	<ul style="list-style-type: none"> We believe in the power of diversity in effective decision making - all AACo positions are open to applicants based on merit, not gender or background <p>Goal: Maintain for the best outcomes across our operations</p>
	Female representation in leadership roles	33% of people leaders 33% of Leadership Team 11% of Board	<ul style="list-style-type: none"> We believe in the power of diversity in effective decision making Women are people leading across our organisation - on the stations, in the feedlots and in the offices <p>Goal: Maintain with a vision to increase, based on merit not gender</p>
Livestock Transport	Notifiable fatalities	Farms: 0 Feedlots: 0	<ul style="list-style-type: none"> There have been no fatalities for FY19 or 2019 calendar year <p>Goal: Maintain and continue to drive safety as our number one priority</p>
	Product rejected for food safety reasons	0%	<ul style="list-style-type: none"> There are no recorded instances of rejected product for FY19 or 2019 calendar year <p>Goal: Maintain through constant engagement with and scrutiny of processors</p>
	Live export fatalities	Average mortality rate of 0.04% of herd sold to third parties for export ⁴	<ul style="list-style-type: none"> AACo is not an exporter of live cattle in our own right. We partner and sell to only reputable live exporters who operate under the most strict animal welfare standards (including on board and at their destination) Reportable incident mortalities of AACo cattle are monitored <p>Goal: Reduce by continuing work with industry leaders to reduce mortalities</p>

¹ Unless otherwise indicated, the 'AACo Baseline' is current at November 2019. ² Data collated by Cibo Labs from 2016 - 2017.

³ Calculated according to installation date and location of each array; this does not include energy required for bore operation.

⁴ Based on data to November 2019 provided by two major exporters, accounting for 91% of exports.

Focus one:

Animal Health & Welfare

At the beginning of the day and the end of the day, our focus is happy, healthy cattle.

From our breeding programs to our farm handling procedures to our feedlot operations, it's all done with utmost care. We use the word 'cattlemanship' to describe our craft, our people's approach to managing cattle. Our people pride themselves on their cattlemanship – their love of animals is why they work in this profession.

We drive compliance through our Animal Welfare Policy and ensure standards are maintained with ongoing training for new and existing staff. Training is in alignment with the Australian Animal Welfare Standards for Cattle

and we've recently established an Animal Welfare Committee to continue to drive improvement of animal welfare standards company-wide. Our training is covered in more detail in the 'People and Culture' section of this Report.

In the feedlots, we have successfully achieved 100% compliance with the National Feedlot Accreditation Scheme Animal Welfare Standards for the last 12 years.

Using National Livestock Identification System tags and a dual-tagging system we individually monitor each cow, calf and bull throughout the duration of its lifetime. This includes tracking animal performance such as weight gain, feed efficiency, body condition

score, fertility and vaccinations. All properties have their own biosecurity plans.

We aim to vaccinate all our cattle at least against clostridial diseases relevant to their location and they're all covered by an antibiotic stewardship program – we don't use antibiotics unless an animal requires them or a veterinarian advises their use. We do include small amounts of monensin in the feed mix at the feedlots - it acts to reduce methane production and increases energy efficiency. Monensin is classed as an ionophore rather than a therapeutic antibiotic by the World Health Organisation, which means its consumption by cattle is unrelated to human antibiotic use.

5 Freedoms of Animal Welfare

Our approach to animal welfare is centred around the five freedoms of animal welfare, an internationally recognised standard to promote optimal animal health and welfare. Throughout this report we will use these icons to demonstrate that animal welfare really is integral to all that we do.



1

Freedom from hunger & thirst

By ensuring ready access to fresh water and a diet to maintain full health and vigour



2

Freedom from discomfort

By providing an appropriate environment, including shelter and a comfortable resting area



3

Freedom from pain, injury or disease

By prevention or rapid diagnosis and treatment



4

Freedom to express normal behaviour

By providing sufficient space, proper facilities and company of the animal's own kind



5

Freedom from fear & distress

By ensuring conditions and treatment which avoid mental suffering





Stock Take: *Feedlots*

We grain-feed in feedlots to get our backgrounded cattle to target weight quicker (reducing life cycle emissions), to deliver a consistent eating experience 365 days of the year and also to ensure that in drought times we can provide young weaners a good nutritional start to life. This means we can consistently deliver a high quality product that tastes great. From a regulatory perspective it is the most scrutinised component of our operations.

All feedlots in Australia are subject to strict compliance and monitoring by government and industry bodies. AUS-MEAT are audited by the Queensland Department of Agriculture and Fisheries to manage the National Feedlot Accreditation Scheme (NFAS), a quality assurance scheme. AUS-MEAT and the Department conduct scheduled and random audits to ensure our compliance with certificates and licenses under NFAS, Livestock Production Assurance On-Farm Quality Assurance (LPA QA) and the European Union Cattle Accreditation Scheme (EUCAS).

In addition to these regulatory bodies, peak industry bodies Meat and Livestock Australia and the Australian Lot Feeders' Association work hard to maximise the animal welfare outcomes and production efficiencies of feedlots. These industry bodies consistently invest in R&D focused on methane abatement through supplementation, feed efficiency, management techniques and genetics, and we are supporting them where we can.

We also push to exceed the standards when it comes to veterinary visits and animal welfare:

- Our feedlots (Aronui and Goonoo) consistently place 1st and 2nd in Australia by independent veterinary reviews for animal welfare standards
- Double the required instances of water trough maintenance
- Double the bunk maintenance
- All pens at Aronui are fully woodchipped for hygiene and comfort and we include extensive shade options at both our feedlots
- Pens visually monitored daily and each animal physically assessed daily by pen riders
- All incoming cattle receive vaccinations and boosters
- Low stress cattle handling procedures are followed at all times
- All cattle have a week-long 'o-week' orientation into their pens, are kept with their mates and have room to socialise in their pens
- Best technology weather monitoring to ensure preparedness for extreme weather events
- Full biosecurity plan across each feedlot
- Up to 30% of feed provided in feedlots is inedible by humans but a by-product of human consumption – almond hulls, cotton seed, dry distillers grain, dry bread meal - we do not feed any soy products to our cattle
- At Goonoo we have a farm where we grow fodder for the feedlots and backgrounding properties based on seasonal requirements, to assist in managing seasonal variability
- We have Australia's leading animal nutritionist prescribing the ideal rations for our animals for optimal health and performance
- Reusing nearly 100% of rainfall that runs through the cattle pens at feedlots in irrigation





Stock Take: *Animal Nutrition*

Our cattle love to eat. They spend most of their days grazing the extensive rangelands of our properties across the Northern Territory and Northern Queensland. The native landscape is a diverse mix of savanna grasslands, Mitchell Grass Downs, Channel Country, floodplains and everything in between, providing the perfect fodder for the cattle. Our operations team works hard to ensure the herds always have access to clean water and a diverse array of high quality pasture species that are kept in the best possible condition.

To achieve this balance, the Rangelands Team is actively monitoring the amount of available pasture and the nutritional needs of our cattle via dung samples to strike the best balance between productivity and sustainability to ensure we have both healthy cattle and healthy landscapes. Thanks to our geographical spread, we can make decisions easily to move a herd when it's in the best interests of the cattle and the environment, a key advantage in the face of climate variability.

We create our own mineral and nutrient supplements known as 'lick blocks'. These ugly beauties are like self-serve supplement stores which are particularly popular when the grass is lacking certain nutrients or a cow is in calf or lactating – cattle are very in tune with their stomachs and know when they're lacking minerals or vitamins. Making our own lick blocks means we reduce our transport requirements and we can fill them up with the good stuff and adapt it when the herd needs it most – depending on location, climate and pasture condition these will include protein, phosphorus and amino acids.

The cattle enter a feedlot after their days on the rangelands and we have the leading Australian animal nutritionist overseeing their dietary intake, supplements and access to water.



An example of one of our lick blocks at Glentana

Focus two:

Environmental Stewardship

Environmental stewardship to us is about doing what's best by the lands we manage, because it's good for the environment. And what's good for the environment is ultimately good for business. It is no coincidence that 90% of the Company's owned and leased properties are extensive open grassy landscapes, ideal for cattle grazing but non-arable, so not suitable for other agricultural purposes. AACo has developed this portfolio over the years and we actively manage our properties to maintain this state. We consider the environmental outcomes of all the decisions we make on our lands. This means management for pasture utilisation, weed management and land condition assessments to limit our impact on native grasses and soil, flora, fauna and cultural heritage and values. We restrict grazing at some of our riparian zones but believe this is an opportunity for improvement.

We cover a lot of Australia – six and a half million hectares – which we consider an opportunity. It's an opportunity because we can move cattle around our properties based on climatic and pasture conditions, managing pressure on fragile or drought stricken areas

and instead encouraging regeneration of those areas. It's an opportunity because it allows us to exclude over 212,000 hectares from cattle grazing, and set aside 28,218 hectares for conservation management under five Territory Conservation Agreements. It's an opportunity because it's almost 1% of Australia's landmass, so we have a big part to play in leading proper management of the land.

Our cattle produce methane, a greenhouse gas that contributes to climate change. We are actively looking at ways in which we can contribute to the climate solution in this space. We are doing this by looking at ways to mitigate the effects of climate change and environmental degradation. We will balance the effects we can't avoid, with positive contributions. And we will adjust how we operate to adapt to changes which are beyond our control, to enhance our resilience. And we will join forces with the rest of our industry to continue to invest in research to reduce the 'hoofprint' of beef production in Australia, to enhance our sustainability.

90% of our lands have always been open savanna rangelands, so we maintain them in their natural native state - *providing the perfect fodder for our cattle*

- Approximately 98% of the lands currently under our custodianship have not been cleared and we don't clear land for grazing – just for infrastructure like homesteads, roads and fencing
- The savanna rangelands are non-arable so cannot be used for growing crops
- We're committed to mitigating our impacts, balancing our contributions and adapting to the challenges ahead to bolster our climate resilience



Stock Take: *Land Management*

Management of our lands is central to our operations. It's a key part of perfecting the art of Australian beef – respecting what makes it possible. Ensuring healthy soils, maintaining natural water sources and honouring the natural landscape all equate to healthy cattle and efficient farming. It's about respecting what we have today to ensure we can continue to operate on the lands in the future – that's sustainability.

The expansive nature of our operations means we've got many stories to tell. There are the vast savanna plains of Northern Australia, the rich black-soil flooding Gulf country and the fertile cropping and feedlot operations in Southern Queensland. They're all unique and

special to our operations, and all must be treated individually. We are proud of our track record in this space but are continuing to drive improvement and want to share how we manage the landscape based on science, the seasons and climate variability.

Our Rangelands Team are specialists dedicated to actively managing our lands. They predominately use two methods – forage budgeting and a land condition framework. Forage budgeting is about assessing the availability (kilograms per hectare) of pasture in proximity to water sources, planning cattle movements accordingly and monitoring this over time to ensure no pasture is grazed to a point of compromising regrowth

the following year.

The Rangelands Team also use a land condition framework as a tool to inform the carrying capacity of each station over seasons long term. Incorporating soil health, pasture health, land diversity, weed prevalence and woodland growth, this tool can assist in projecting stations' responses to climatic events on a long term basis. Combined, these are powerful tools to assist in planning cattle movements. Our expansive network of properties allows us to make decisions based on these projections to alleviate pressure on underperforming or fragile landscapes.

Stock Take: *Land Clearing*

We do not participate in extensive clearing of native landscapes to raise cattle or grow fodder. We count ourselves lucky that a large portion of our lands traverse the largest remaining intact tropical savanna in Northern Australia. These lands are not cleared lands, they have been maintained in their natural state by pastoralists and their integrity remains intact. Active management of these lands is considered optimal for conservation outcomes. This includes best practice weed management, control of feral animals, maintaining ground cover and controlled use of fire to

assist in regeneration and wildfire avoidance. Naturally occurring fires and floods also play a role in shaping the landscape, changing vegetation composition year to year.

Excluding homesteads, fencing and access roads, of the lands under our control approximately 98% have not been cleared for beef production. The clearing that has occurred has predominately been on our 'intensive properties' in parts of Central Queensland where either we, or the previous owners, cleared some land for farming, in line with state-based regulation. As the

numbers indicate this constitutes a very small proportion of our portfolio of properties.

Aside from accommodating necessary infrastructure (housing, fencing, roads) any clearing we do these days is to manage secondary regrowth – weeds and woody material that has regrown after clearing events (such as fires). While woody regrowth has carbon sequestering benefits it is a change to native vegetation growth and needs to be managed. This management is done in accordance with licenses and regulations.

Stock Take: *Climate Change*

AACo's operations are paddock to plate – we are responsible for the whole of the life cycle of our cattle. Inherent in the production of cattle is the release of greenhouse gases, particularly methane. While AACo is responsible for less than 0.05% of the global cattle herd, we are pursuing a range of strategies to mitigate, balance and adapt to climate change. In this report we're publishing our emissions profile and sharing the impact of different strategies to demonstrate our commitment to our sustainable future.

Our scope 1 and 2 emissions in FY19 were 625,006 metric tonnes (t) CO₂-e. Our emissions profile was calculated by an independent third party, using the University of Melbourne's Greenhouse Accounting Framework for Australian Beef, based on the Australian National Greenhouse Gas Inventory Methodology. This figure captures all emissions produced by AACo in breeding, rearing, and feedlotting our cattle, farming activities, natural gas and fossil fuels used on the stations and electricity used by the Brisbane head office. It does not include third party transport emissions or emissions produced by external grain production.

As the amount of methane produced each year is dependent on the size of the herd, simply aiming to reduce our emissions profile each year does not allow for fluctuations in the herd size and composition or seasonal climate variation. The more accurate measure is the emissions intensity per kilogram of product. This is calculated by dividing the total emissions produced by the total kilograms of liveweight produced in the same period, accounting for natural attrition. The emissions intensity of our beef is 9.1kg CO₂-e/kg liveweight. This is significantly lower than Australian beef's average, and Australian beef is some of the most efficient in the world owing to our grazing systems and sophistication of operations.

These numbers are our starting point for our sustainable beef journey. We look forward to leading and working with industry as we investigate and adopt new means to reduce our greenhouse gas emissions.

These numbers do not account for the practices we utilise on our lands to sequester carbon in much of

what we do, and what we have always done for the betterment of the lands on which we operate. It is important to recognise greenhouse gas emissions of themselves do not demonstrate the 'sustainability' of agricultural operations – considerations of environmental sustainability are much broader than that and must include the practices driving the treatment of the land, water resources and the inputs used. Environments that are well looked after will be more resilient to the effects of climate change and effective management processes will ensure the healthy ongoing functioning of the carbon cycle.

Calculating agricultural emissions and reducing annual emissions is not a straightforward process. As the diagram opposite demonstrates, the majority of our emissions are enteric – methane (CH₄) produced in the fore-stomach of the cattle and released by belching. Cattle's ability to convert coarse plant material into high quality protein is why they are well-suited as rangelands grazers, however the methane by-product proves a challenge. Methane is a greenhouse gas more potent than carbon dioxide but with a much shorter lifespan once in the atmosphere. The figure is represented as CO₂-e, 'carbon dioxide equivalent', to account for the variance in effect of different greenhouse gases once in the atmosphere.

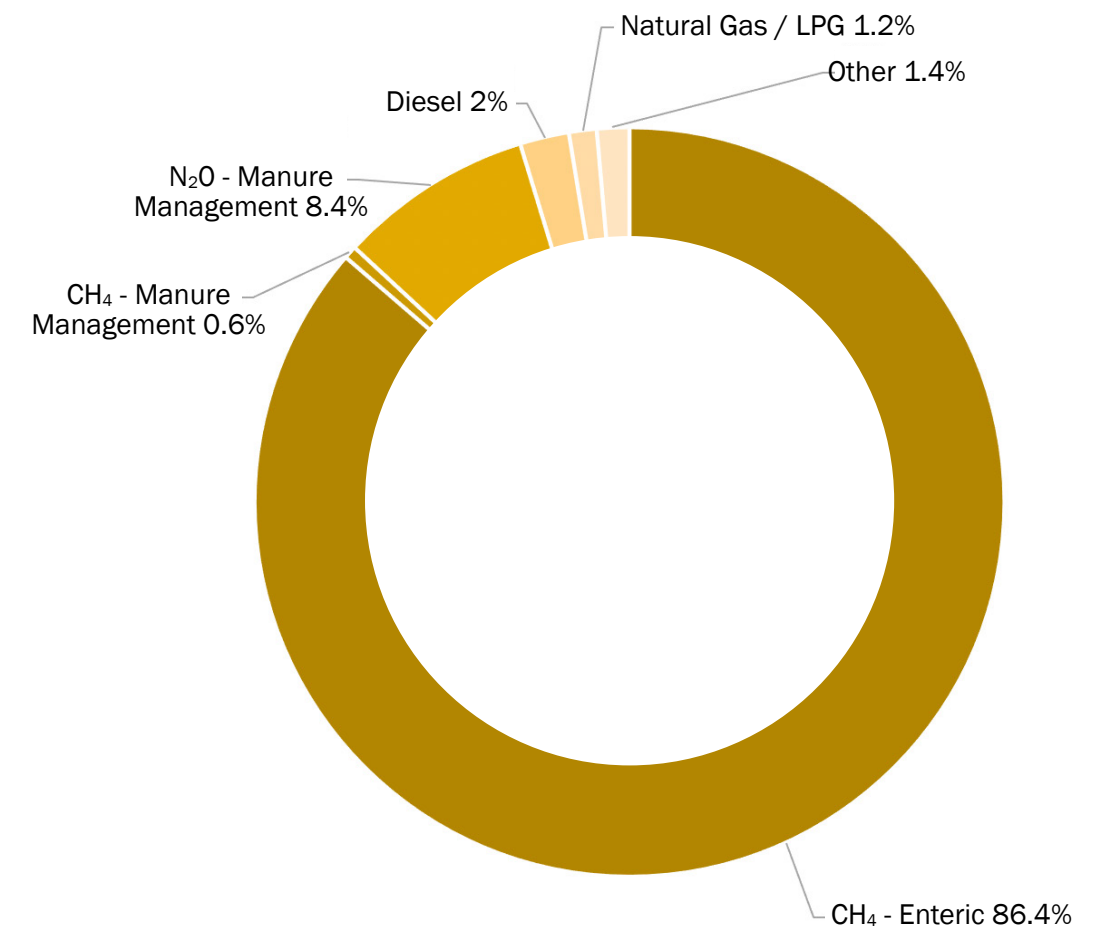
We were the first private organisation to install GrowSafe back in 2014, a system used to measure methane emissions, and have since been working with the different herds to refine our knowledge on breeding for reduced methane production. Reducing lifecycle emissions are primarily a result of increased feed efficiency and fertility – we are focused on breeding animals that are highly reproductive and more efficient at converting feed into energy rather than losing the energy through belching.

Reducing our emissions intensity from electricity generation is also a focus. Neither of our feedlots rely on coal-powered generation and we're increasingly focusing on solar generation at our stations – see our Stock Take on diesel to solar conversion. We aim to set emission reduction targets, better account for scope 3 emissions and tell more of our renewable energy story as we progress our sustainability journey.



Percentage breakdown of AACo's emissions profile

FY2018/19





Stock Take: *Converting From Diesel to Solar*

Approximately 8% of our energy requirements are met by solar energy and we are working with experts to replace all diesel bore pumps and turkey nests (dams) with solar pumps and tanks across our stations:

- 15% through replacement process
- Tanks reduce evaporation by 30-50%
- Solar bores reduce reliance on diesel in water production by 100% - saving approximately 1L/hour of pumping
- With improved connectivity, live reporting will significantly reduce diesel and man hours used to conduct water quality assessments
- Improves water quality and access for cattle, which in turn increases weight gain and potentially reduces lifecycle emissions





Stock Take: *Building our climate resilience*

Our North Queensland properties – Carrum, Dalgonally, Canobie and Wondoola – are valuable to us because of their position on the Flinders River catchment. During the Wet, flooding brings to life the low-lying savanna, resulting in the rich black soil being replenished that allows the natural pasture to flourish and rejuvenation of the major tributaries that flow through the stations.

Over the years we've learnt much from these flood events and invested heavily to increase our resilience to flooding, predominately through building of flood refuges – a higher ground for cattle and other native fauna to seek reprieve during flood events and enable food drops in multi-day flood events.

The February 2019 Gulf floods were different – the worst on AACo's records, by a significant margin. Measured statistically by the Bureau of Meteorology as a 1-in-500 year event, no amount of preparation could have prevented the tragic loss of animal life we experienced. The rainfall maps (right) illustrate the massive amounts of rainfall involved, with several locations across northwest Queensland receiving more than 600mm in 7 days.

The combined effect of very low temperatures for the region, sustained and heavy rainfall and rivers 70km wide resulted

in a devastating loss of some 43,000 head of cattle. With additional destruction and damage to buildings, fences and water infrastructure the loss was valued at \$46.6m.

The climate change science predicts that warmer global atmospheric and ocean temperatures will globally lead to an increased likelihood and severity of heavy rainfall events. Fitting with our commitment to mitigate, balance and adapt to climate change, we are working hard to make sure we never again experience a loss of animal life to this scale.

To increase our climate resilience in North Queensland, we are adapting. Four of our 22 flood refuges were swept away, so using the extensive experience of our management team we have redesigned to provide more robust and accessible refuges for our cattle. Traditionally two metres high, 150 metres long and five metres wide, the refuges were effective if correctly oriented to the direction of the floodwater flow. Unfortunately this isn't always possible to predict.

By the end of 2019, 37 new round refuges were completed. In response to data gathered and modelling from the flood event they're up to two metres taller to allow cattle access to higher ground. The truncated design and sloping sides will also act as

a wind break during inclement weather events, and with an area of 90 metres on top from one side to another there's plenty of room for cattle to huddle. The shape of these is the real key though – the round design means that water will naturally deviate around the refuges, regardless of the direction of flow. The added bonus is that the burrow pits from which we took the soil to build the refuges will act as natural reservoirs, retaining valuable water following a flood event.

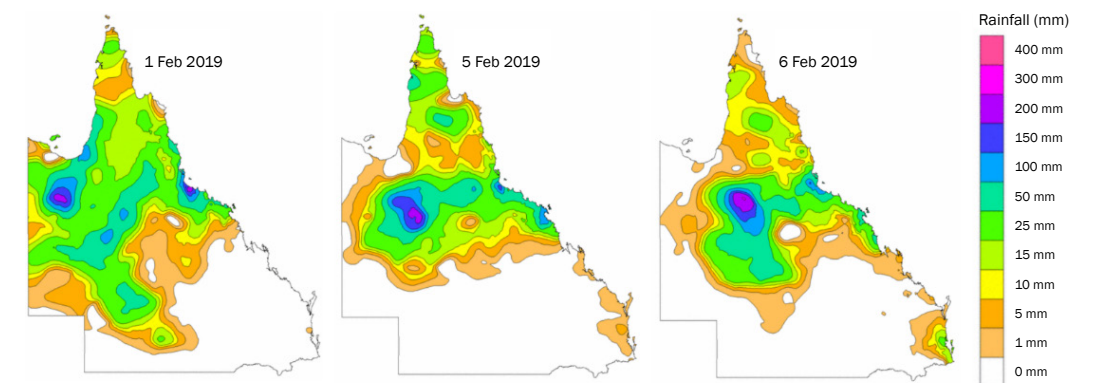
In addition, we are investing in early warning systems and have designed operational flood plans so we are better prepared to react in flood events. So too are the cattle – we are training them to utilise the flood refuges to maximise their chances of survival.

Across the rest of our portfolio we're looking at how else we can enhance our climate resilience - managing the effects of drought, increasing feed production to stockpile where possible, managing stock rotation to maintain pasture growth on the rangelands. We'll continue to share what we learn to enable Northern Australia's beef industry to be more climate resilient.



“I've been on the land a long time. And I've learnt something from every drought I've been through. I've also learnt something from every flood I've been through... And I've been through a few of each”

Donald McGauchie, Chair, AACo





Stock Take: *Alternative Proteins*

The global population is growing, and with it the demand for high-quality protein. We consider Australian beef's position in supplying for this future demand to be bright, especially with the steps we're taking to mitigate our effects on the ecosystem, balance our greenhouse gas contributions and adapt as required to the challenges of climate change.

Unfortunately even with the best pasture and most sustainable production systems, we at AACo don't produce enough beef to satiate the projected global populations in 2050. So we're not ignoring what is happening in laboratories around cell-based and plant-based 'meat' – as members of Meat and Livestock Australia, we're looking into the science, the environmental impact and the appetite for these protein alternatives. For now, we're going to keep focusing on our farm grown meat because it's the most natural, healthy and unprocessed option and is generally less energy intensive per kilogram. And because it tastes great.



Focus three:

People & Culture

AACo would be nowhere near where we are today without the people on the stations that love and care for the cattle and the land day in, day out.

That's why we only recruit passionate men and women, regardless of their background. Our focus is on providing extensive training and opportunities for them to grow, and services to support them when they're not feeling so great. In doing these things, we've been able to hold onto some great people too – some of our staff have been with AACo for over three decades. The deep relationship our people build with the land is part of their value – they become attuned to the seasons and the trends and truly are our sustainability leaders.

Safety is a key part of AACo's culture, because the safety of our people is central to our sustainability as a company. We are continually identifying unnecessary risk factors – like manual windmill servicing – and developing alternative approaches such as replacing our windmills that require manual servicing with solar powered bores.

We kick the team-building process off with 'O-Week' (Orientation Week), where all new recruits across our properties are trained up to the baseline skills and safety level prior to mustering season. The rest of the learning happens on station, where they gain skills as they progress through structured modules in our *'Skills Framework'*.

We want our staff to know they're part of something BIG, so we ensure they feel connected to our people on other stations. Sometimes there's some healthy rivalry – we host inter-station challenges and football games which always draw a crowd. We have formal recognition programs and acknowledge staff when they are outstanding, and promote people based on merit. The size of our operations means we can move people around to make sure they find the perfect fit – on the rangelands, in the feedlots or in the office, there are plenty of opportunities to go around.

All station staff are provided the same safety and skills induction prior to commencing their role in the field, regardless of their level or role

- Partnership with Royal Flying Doctor Service for a three year program to boost resources and mental health awareness across the Northern Queensland Gulf region communities afflicted by the February 2019 flooding event
- We have a health service that travels across regions to provide physiotherapy and mental health support to team members
- We develop our team through our *Skills Framework* – giving everyone the tools they need to excel
- Most stations have a mental health first aid trained officer
- 40 traineeships commenced in FY19 ensure the next generation of AACo men and women can find life-changing opportunities in our business

Local *Partnerships*

We have a long history living on the land – but not as long as the Traditional Owners and Custodians of the lands on which we operate. We respect this rich relationship with the land and celebrate it as part of our culture. AACo's NT properties accommodate three Community Living Areas (CLAs). We employ Indigenous men and women from these CLAs and other towns surrounding our properties, providing training through our *Skills Framework* and flexible working arrangements to enable ongoing participation in cultural obligations. This includes agreements allowing traditional hunting practices to continue on AACo properties. We partner with the Northern Territory Cattleman's Association in delivering the Pastoral Real Jobs Program, focusing on engagement, training and employment and support for young Indigenous men and women wanting to engage in the pastoral industry. We've also helped develop Indigenous contracting firms, specialising in weed management and mustering.





Focus Four:

Livestock *Transport*

AACo's expansive operations are an advantage in the opportunities they provide for balancing access to good pasture without overgrazing. This allows for effective herd and land management as part of the natural cycle as well as allowing AACo to apportion areas for conservation. It does however increase our reliance on road transport. We're reviewing our operational model and a key commitment for FY21 is to simplify our herd movements to reduce reliance on transport, for the benefit of the animals and to reduce diesel consumption. Considering our diverse geographical placement across Northern Australia some cattle movements are unavoidable which makes safe, low-stress and low-risk transport an integral part of our operations.

We have a dedicated Transport Logistics team, whose role is to ensure our cattle are best prepared for transport. This means taking into consideration the entire process – mustering and assembly, handling and waiting periods, loading, journey duration and conditions, spelling periods and unloading.

Our Transport Logistics team ensures that we only work with 100% Truck Safe accredited 3rd party road carriers and only sell to live exporters who participate in live export under the most strict animal welfare standards, including onboard and at their destination. We support the ongoing review of live export processes to ensure only the most stringent standards are accepted.

Key Principles:

- Cattle are adequately prepared – well fed and watered
- All cattle are checked by multiple staff to ensure they are 'fit to load' – strong enough, free from injury, not late in pregnancy
- All cattle-handling processes and facilities are well designed and maintained to keep stress low
- Only competent and properly trained handlers are involved
- Road and rail transport facilities and vehicles are well designed and maintained
- All journeys are well planned, in consideration of weather and other factors that could affect the welfare of the cattle
- Feed, water and shelter requirements along the journey are met
- Protection from, or treatment for, injury and disease are addressed
- Mortality rate of approximately 0.04% for animals sold to 3rd party live exporters



*&
that's where
we're at.*

We look forward to working with industry,
government and scientists as we continue on
this journey of sustainable beef production



**THE ART OF
AUSTRALIAN BEEF**

2019 Sustainability Benchmarking Report

Published June 2020
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