AN ON-FARM SUSTAINABILITY MODULE
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INTRODUCTION

The Greenham Beef Sustainability Standard (GBSS) provides a practical set of key indicators and measures to enhance and showcase the Greenham supply chain’s sustainability credentials.

Developed in response to growing market demand for robust and transparent environmental credentials, the GBSS was created in partnership with Greenham cattle suppliers and customers, and agribusiness consultants, Pinion Advisory. It has also been independently endorsed by Certified Humane®, and leading agriculture and environmental science specialists, Integrity Ag & Environment.

Strengthening the existing NEVER EVER Beef Program, which launched in 2012, the standard is based on the four themes identified by industry in the Australian Beef Sustainability Framework (ABSF), which defines sustainability as the “production of beef in a manner that is socially, environmentally and economically responsible”:

The on-farm sustainability module has three tiers of achievement. Tier one prioritises education and planning, and sets the baseline for sustainable management in the NEVER EVER supply chain. Tiers two and three focus on continuous improvement, striving for optimum ecological health and carbon neutrality.

The tiers are additive i.e., achieving tier two means a producer has met all the requirements of both tiers one and two.

**Product packed off cattle from accredited properties that have achieved Tier two or three of the GBSS is eligible to carry a 'Certified Regenerative' claim.**

For producers operating mixed farming systems, the indicators and measures outlined in the standard are applicable only to the beef enterprise.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>Biodiversity</strong></td>
<td>Variability among living organisms, including the relative complexity of species, communities, gene pools and ecosystems. This includes soil organisms, pollinators, beneficial organisms, agricultural and <strong>grassland</strong> plants and <strong>wildlife</strong>. Native biodiversity refers to the organisms that are indigenous to an area and have not been introduced either directly or indirectly by human activity.</td>
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<tr>
<td><strong>Breeder</strong></td>
<td>Any farming enterprise engaged in breeding cattle, including studs, commercial breeders, and hobby farmers.</td>
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<tr>
<td><strong>Carbon sequestration</strong></td>
<td>The process whereby carbon dioxide is removed from the atmosphere and stored in carbon sinks such as soils and vegetation.</td>
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<tr>
<td><strong>CO2e</strong></td>
<td>Carbon dioxide equivalents are a unit used to compare emissions from different Greenhouse gases (GHGs) are gases in the Earth’s atmosphere that trap heat. They allow sunlight to pass through the atmosphere, but prevent the heat generated by sunlight from leaving the atmosphere. The primary greenhouse gases in Earth’s atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone. Based on their global warming potential (GWP) over a specified time period, typically 100 years (GWP&lt;sub&gt;100&lt;/sub&gt;).</td>
</tr>
<tr>
<td><strong>Conservation tillage</strong></td>
<td>Conservation tillage leaves 30% or more of the soil surface covered with crop residue.</td>
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<tr>
<td><strong>Carrying capacity</strong></td>
<td>Long-term carrying capacity refers to the average number of animals that a paddock can support over a 5–10-year period and depends on the: • mix of land types • condition of these land types • climate • evenness of use by livestock • feed accessibility due to water availability and geography • grazing strategy or method • goals for animal production and land condition. Calculating long-term carrying capacity provides an indication of the potential stocking rate and a benchmark for management.</td>
</tr>
<tr>
<td><strong>Greenhouse Gas Emissions (GHGs)</strong></td>
<td>Greenhouse gases (GHGs) are gases in the Earth’s atmosphere that trap heat. They allow sunlight to pass through the atmosphere, but prevent the heat generated by sunlight from leaving the atmosphere. The primary greenhouse gases in Earth’s atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.</td>
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<tr>
<td><strong>Ground cover</strong></td>
<td>Vegetation (living and dead) that is in contact with the soil surface.</td>
</tr>
<tr>
<td><strong>Minimum tillage</strong></td>
<td>Minimum tillage describes the aim of conservation tillage. It involves three or less tillage passes (including seeding).</td>
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<tr>
<td><strong>Riparian vegetation</strong></td>
<td>Vegetation that grows along banks of a waterway extending to the edge of the floodplain. Also known as ‘fringing vegetation’.</td>
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<tr>
<td><strong>Stocking rate</strong></td>
<td>The number of livestock in a paddock or a whole farm, and is expressed as an indication of the number of a particular type of animal per unit area.</td>
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<tr>
<td><strong>Tactical grazing</strong></td>
<td>Tactical grazing optimises the use of different grazing methods, including rotational grazing, throughout the year to meet animal and pasture objectives at different times.</td>
</tr>
<tr>
<td><strong>Wetland</strong></td>
<td>Area of permanent or periodic/intermittent inundation, with water that is static or flowing, with a depth that does not exceed 6 metres at low tide.</td>
</tr>
</tbody>
</table>
1. ANIMAL WELFARE

Superior animal health and wellbeing is a priority for Greenham. The Greenham NEVER EVER (NE) Beef Program, which was established in 2012, incorporates stringent animal welfare requirements from Livestock Production Assurance (LPA) and Certified Humane® (CH). The GBSS animal welfare requirements bolster the existing NE program and bring the Greenham supply chain into alignment with the ABSF.

1A. Selection for polled animals

Breeding for a polled herd promotes improved animal welfare by negating the need for adverse procedures such as dehorning and disbudding. Polled herds also reduce fighting in herd animals and associated wound management. 

*NB: These requirements are applicable only to breeders.*

**TIER 1**

**AW1:** Polled genetics are preferenced in the production system, targeting at least 75% of the herd to be naturally polled.

**TIER 2**

**AW2:** All replacement heifers are polled.

**TIER 3**

**AW3:** Strictly polled genetics are used, preferencing homozygous polled bulls.

1B. Animal health & wellbeing

Animal health and wellbeing is further bolstered using processor feedback to identify subclinical disease impacting animal health and performance.

**TIER 2**

**AW4:** Processor feedback is used to identify and address potential health issues within the herd e.g., bruising, dark cutting rates, and animal health feedback.
2. ECONOMIC RESILIENCE

Economic health is intrinsically linked to the overall performance and capability of any business, making it an important measure of sustainability. Profitability can bolster resilience against unexpected challenges such as drought and market change, which can have flow-on effects to environmental performance and animal welfare. As global demand for Australian beef increases, expanding industry’s access to premium international and domestic markets will support stronger and more profitable beef businesses (p12, Australian Beef Sustainability Framework).

2A. Business performance drivers

Data collection and analysis enables producers to identify opportunities to improve productivity and profitability. Clear goals and objectives provide a pathway for improving profitability while managing climate variability, so that the enterprise is sustainable in the long-term.

*Note: during an audit, compliance to the below indicators will be assessed through the producer’s ability to articulate and/or demonstrate how the below indicators are achieved. Producers are not required to share financial records or sensitive information with auditors.*

<table>
<thead>
<tr>
<th>TIER</th>
<th>Description</th>
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<tbody>
<tr>
<td>TIER 1</td>
<td>Overall business financial performance is reviewed annually. This may range from assessment of cash flow, reports to financial institutions or in-depth assessment of financial KPIs.</td>
</tr>
<tr>
<td>TIER 2</td>
<td>Relevant production and financial records are maintained to monitor performance.</td>
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<tr>
<td>TIER 3</td>
<td>Processes and/or tools are used to improve adherence to current and future market requirements e.g. carcase feedback, myMSA, Greenham Connect, and for breeders, EBVs.</td>
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<tr>
<td>TIER 3</td>
<td>Key business performance drivers (production or welfare indicators) within management control are measured and performance is assessed against previous year or budget or KPI/target.</td>
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<tr>
<td>TIER 3</td>
<td>The profitability of the business is assessed annually either through measurement of cost of production or return on assets managed or return to capital.</td>
</tr>
<tr>
<td>TIER 3</td>
<td>Key performance indicators (KPIs) or targets are set for at least two key business performance drivers and performance against these KPIs is assessed annually.</td>
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3. ENVIRONMENTAL STEWARDSHIP

As a major land steward, the Australian beef industry has a close relationship with the environment in which it operates. The beef industry is ideally positioned to contribute to the ecological health of the Australian landscape through the implementation of sustainable land management and grazing practices. Best practice environmental stewardship will not only improve the resilience of Australian beef producers but also nurture their surrounding ecosystems to foster productivity (p13, Australian Beef Sustainability Framework).

3A. Maintaining ground cover

Ground cover relates to the percentage of ground with vegetation cover (including litter), compared to the percentage with bare ground. Maintaining ground cover is important for minimising nutrient run-off, erosion and preserving soil carbon. In livestock production systems, proactive pasture management practices are the most effective way to manage ground cover. As a result, ground cover can be used as a measure of effective grazing and pasture management.

Note: ground cover assessments are to be made on all areas of the property used for beef cattle production, excluding trafficked or high use areas e.g. feed pads and laneways. Further information regarding ground cover measurement and risk assessment is available in Appendix 1.

EN1: Areas on the property that are at a high risk of erosion are identified, and active management strategies to promote and maintain ground cover are adopted (e.g. controlled grazing, stock exclusion, fencing, revegetation, etc.).

EN2: Ground cover in production areas is monitored regularly during livestock moves, with pro-active management to ensure ground cover is maintained at moderate levels.

EN3: Farm ground cover assessments are completed using one of the free tools below (or an equivalent alternative). Records must be kept and made available during audits.

- **More Beef from Pastures (MBfP) Tool**
  - Assess ground cover (paddock)
    - Assess annually in February/March
  - Australian Feedbase Monitor (online)
    - Assess seasonally in the first week of each March, June, September, and December.

EN4: Ground cover levels across the grazed areas of the property are maintained at ≥80% in high rainfall areas and ≥75% in low rainfall areas (as per Appendix 1).

EN5: Ground cover levels are maintained at ≥90% across all productive grazing areas of the property at all times of year.
3B. Healthy soils

Proactive nutrient management is important to ensure that soils aren’t depleted (more nutrients being removed than added to the system) or overloaded, with nutrients lost to the environment. Tracking key soil parameters such as organic carbon, pH and salinity over time can also be used to monitor overall soil health.

*Note: records of fertiliser applications and other soil inputs are maintained as per requirements in the NEVER EVER Beef Program.*

EN6: Fertiliser application is based on soil and plant requirements and applied using best practice management techniques. Best practice application techniques for nitrogen fertilisers are outlined in Appendix 2.

EN7: Soil testing of perennial pastures is undertaken at minimum once every three years. Tests must be a minimum depth of 10cm and of consistent depth from one test to the next. It is important to take soil tests at the same time of year for each sample, ideally late summer to early autumn. Tests must include the following parameters:

- available phosphorus (P)
- potassium (K)
- sulphur (S)
- pH
- organic carbon (OC)
- electrical conductivity (EC)
- organic matter.

The following parameters must also be measured in the first year:

- exchangeable sodium percentage (ESP)*
- phosphorus buffering index (PBI)

*Where ESP is >6, the producer is required to retest in 3 years’ time.

Soil fertility trends are monitored over time. Refer to Appendix 3 for optimal targets and guidelines around soil testing and interpreting results.
EN8: Producer to select at least one test from the below list of soil biological measures and conduct testing at a minimum once every three years. The variables selected in year one must be continued (and can be built on) so trends can be monitored over time.

1. microbial soil test:
   - total bacteria
   - total fungi
   - total micro-organisms
   - fungi:bacteria ratio
   - microbial diversity indicator.
2. mycorrhizal fungi or VAM test
3. glomalin
4. earthworm count numbers and species diversity. **NB: producers can conduct their own earthworm count, provided records are maintained.**

EN9: Minimum tillage practices are adopted within the beef enterprise.

EN10: An annual nutrient budget is completed. *See template provided in Appendix 6.*

3C. Grazing management practices

Sustainable grazing management is crucial for positive production and environmental outcomes. Matching carrying capacity and stocking rate helps to prevent under or overstocking and the associated negative impacts.

EN11: The producer demonstrates an understanding of their long-term sustainable stocking rate and have records demonstrating their average annual stocking rate for the past 5 years.

EN12: The producer has calculated their carrying capacity in dry sheep equivalents (DSE)/ha.

EN13: An objective assessment of feed supply and projected demand is undertaken at least once per year in Autumn.

EN14: Producer has a documented grazing plan, outlining tactical grazing techniques (including rotational grazing) to match feed supply and demand, and ensure paddocks are given adequate recovery time to optimise soil and pasture health.

EN15: The business has a focus on pasture resilience, ensuring that the species grown are suitable for the environment and underpin a healthy grazing system, incorporating legumes where appropriate.
EN16: Producer maintains a monthly feed budget including measuring monthly average pasture cover and can demonstrate knowledge of their pasture growth rates.

3D. Healthy waterways

Healthy waterways support a healthy environment and are vital for our social and economic wellbeing. They also provide essential habitat for wildlife including many rare and threatened species.

Stock access, soil erosion, overuse of fertiliser, and nutrients from animal waste can all affect water quality and ecosystems.

EN17: Producer complies with relevant water licensing legislation for their property.

EN18: All wetlands are fenced, so that livestock can be excluded from these areas. Where wetlands are occasionally accessed by livestock, a management plan by an appropriately qualified expert must be in place.

EN19: Producer has a documented plan, and can demonstrate actions taken, to ensure livestock do not negatively impact waterways on the property including water quality, bank erosion and damage to riparian vegetation.

EN20: Water usage for irrigation is monitored, and water usage across the beef enterprise is managed to optimise water use efficiency, ensuring any wastage, such as leaking troughs is addressed promptly.

EN21: All waterways are fenced and livestock are excluded, and/or water quality testing is performed to demonstrate that waterways are not negatively impacted by livestock. Refer to Appendix 7 for details of testing requirements.

3E. Climate resilience & emergency preparedness

Climate is the biggest individual driver of production variability in agriculture. Adapting management practices to meet changing conditions will ensure long-term prosperity.

Source: sustainableaustralianbeef.com.au

Drought, fire, and flood plan addressed in GAP and NEVER EVER programs.

EN22: Weather & climate forecasting tools are used to manage for climate variability.
3F. Biodiversity & threatened species management

A variety of animals, plants, insects, and microorganisms helps to foster a resilient and productive grazing enterprise. Biodiversity of plant species also promotes microbial growth within soils and a healthy on-farm ecosystem, boosting the resilience of soil and pastures and promoting carbon sequestration.

EN23: The producer is aware of and adheres to the relevant vegetation and threatened species legislative requirements for their state.

EN24: Producer is aware of any declared weeds on their property and has a management plan in place to control these.

EN25: A property map is maintained, which identifies different native vegetation communities, riparian areas, revegetation areas (planned and existing), threatened species locations, infestations of declared weeds, and natural and man-made water bodies.

EN26: Producer can demonstrate habitat protection activities for known threatened species that occur on the property, and actions taken to minimise threat and maintain/enhance species population. Recognition of protection and conservation works already completed, including conservation covenants and reserves.

EN27: The property’s vegetation condition score is measured at minimum every three years via one of the approved platforms listed below.
- Environmental Credentials for Australian Beef
- National Stewardship Trading Platform

Records are maintained demonstrating that the property’s vegetation condition score is:
1) above the regional vegetation condition score, and
2) the score is maintained/improved year-on-year.
3G. Carbon Management

The Australian red meat and livestock industry has set a target to be Carbon Neutral by 2030 (CN30), enabling industry to stay ahead of current and future consumer, customer, and community expectations.

A carbon footprint is the net amount of greenhouse gas (GHG) emitted within a beef production system, considering any on-farm emissions as well as carbon sequestration. Carbon accounting tools enable producers to determine their net GHG emissions position and identify strategies to reduce emissions and improve carbon storage on-farm.

**EN28:** The producer has successfully completed the MLA ‘Carbon 101’ and ‘Carbon Sense’ e-learning modules, to improve knowledge of on-farm carbon management and enable informed management decisions within their businesses.

**EN29:** Carbon emissions and vegetation sequestration are estimated for the farming enterprise using one of the below carbon calculators.

- Sheep & Beef GHG Accounting Framework (SB-GAF)
- MLA Carbon Calculator
- Zero30 Beef Farmer Carbon Tracker Tool
- Integrity Ag & Environment Verified Carbon Footprint System
- Clean Energy Regulator (CER) Beef herd management calculator

Refer to the MLA ‘Measuring your own emissions’ eLearning module for support in completing the SB-GAF carbon account yourself.

**EN30:** Opportunities to improve the property’s carbon footprint (either by reducing emissions or increasing carbon sequestration) have been identified and producer can demonstrate actions taken.

**EN31:** The beef enterprise has achieved carbon neutrality.

OR

The emissions from the beef enterprise are 30% below the national average (kg CO2e emitted per kg liveweight as reported annually by the ABSF).
PART 4. PEOPLE & THE COMMUNITY

A safe, healthy, and capable workforce is essential to the sustainability of beef production. A commitment to continuous education and training, and workplace health and safety, reduces the risks faced by employees and contractors (p13, Australian Beef Sustainability Framework). Job satisfaction, which is influenced by growth opportunities, a positive environment and achievement, is a leading driver of employee retention.

4A. Commitment to learning

A commitment to ongoing training not limited to WHS education allows employees to grow their knowledge base and improve their job skills to become more effective and safer in the workplace.

PC1: Producer maintains a staff training register containing licenses, qualifications, and training priorities for full-time and part-time employees (includes family members).

PC2: Competency assessments are conducted for key tasks e.g. quad bike use, stock handling, and vaccinations.

PC3: For corporate businesses and family businesses with employees, annual performance reviews are conducted with all employees.

For family businesses with immediate family members only, annual discussions are held with all members involved in the business to discuss:
- personal goals,
- work-life balance,
- business direction/opportunities, and
- individual involvement.

4B. Workplace health & safety

According to Safe Work Australia, “agriculture is one of the most dangerous industries to work in”, due to the combination of hazards including mechanical, working with animals, chemicals, noise, dust and prolonged sun exposure; further exacerbated by often isolated and remote locations. A strong focus on workplace health and safety is key to ensuring a sustainable future for the industry.

PC4: An induction checklist and sign-off is maintained for all full-time, part-time, and casual farm workers and contractors, including family members and sole traders.

PC5: Hazard identification and a risk assessment is conducted for the property and key tasks so that priorities can be set for upgrades, improvements and staff training.
PC6: The following documents and procedures are in place and have been implemented:

- a written workplace health & safety policy
- safe work procedures for high-risk activities
- records documenting incidents and near-miss incidents in the workplace
- maintenance register for plant, including machinery, equipment, appliances, containers, implements and tools.

PC7: An in-depth WH&S system has been implemented and WH&S is part of the everyday activity and culture of the workplace.

4C: Worker rights & remuneration

If you’re employing people on the farm, it’s important to understand what the law requires of you to ensure all staff are legally allowed to work in Australia and are appropriately paid based on the nature of the work they are performing.

PC8: All staff employed are legally allowed to work in Australia.

PC9: All staff employed in the beef enterprise are appropriately remunerated according to the relevant Award.

PC10: Where housing and vehicles are supplied to employees, it is of a reasonable standard and well-maintained.