



**FARMING
FOR THE
FUTURE**

M&S
EST. 1884



Annual Report

April 2016





Background

Founded in 1884, M&S has grown from a single market stall to an international, multi-channel retailer. We sell high quality, great value products to 33 million customers through our 852 UK stores and our e-commerce platform.

Plan A, our ethical and environmental programme, underpins everything we do, from sourcing responsibly and reducing waste to helping the communities in which we operate. It is a business plan that maps out our route to providing leadership in a world that's increasingly resource-constrained and experiencing social change.

When it comes to our food business, an important part of this activity is our 'Farming for the Future' programme. Some of the most significant sustainability challenges around food are focused around primary production and so we've been working with farmers and growers in our supply base since 2010 to help them address the key challenges they face.

Farming for the Future





What is Farming for the Future?

Our core approach is focused on the 4Es:

- **Efficiency** – because farmers and growers that operate at a high level of technical efficiency will be more profitable, use fewer inputs for the same or higher levels of output, and will be more carbon efficient;
- **Environment** – because farmers and growers need to minimise their impact on the environment in terms of their use of soil, water, pesticides and energy and work to enhance biodiversity through appropriate environmental management;
- **Ethical practice** – because farmers and growers need to act ethically in the way that they run their businesses, treat their employees and neighbours and look after any animals in their care, ensuring high standards of welfare at all times;
- **Education** – because there are not enough young people coming into the agriculture industry and so we need to play our part in encouraging more people to consider it as a career option and to help develop those already in the industry so that they can become the leaders of the future.

The practical way that we deliver our programme of activity is through the following:

Inspiration

- We deliver products that excite and inspire our customers, exceeding their expectations and never compromise on quality, integrity or food safety.
- We build relationships with our farmers and growers to inspire them to drive change in their businesses to address the sustainability challenges they face

In touch

- Our ways of working support a long term partnership approach with farmers and growers

Innovation

- We utilise the latest science and innovation on both products and process to ensure we improve things for the better

Integrity

- Our standards are developed with farmers and growers in mind. They are challenging yet achievable, now and in the future

Our Plan A commitment

As the challenges we face evolve so we have evolved our commitments to ensure that we make meaningful progress towards more sustainable agricultural supply chains.

Our previous commitment wording was:

Farming for the Future - Plan A commitment 53:

“Through the M&S Farming for the Future programme we will define key sustainability hotspots by sector and develop plans to manage hotspots in each sector through producer and industry engagement. We will publish an annual report to report on progress and share our learning more widely.”

This will be replaced from April 1, 2016 with revised wording, as follows, and it is this commitment that we will report on in future years:

“Working with our partners, by April 2017 we will publish improved sustainability and animal welfare outcome measure standards for key M&S farmed raw materials including fresh meat, farmed fish, poultry, liquid milk and eggs. Once completed, from 2018, we will publish our year on year performance against these outcome measure standards.”

What has been our focus in the last year?

Over the last twelve months we have been progressing activity based on the priority ‘hotspots’ we agreed the year before:

Produce	Farmed fish	Beef and sheep	Dairy	Poultry	Pigs
<ul style="list-style-type: none"> • Water use • Energy consumption • Pesticide and fertiliser use • Soil management • Training / people 	<ul style="list-style-type: none"> • Feed • Fish health & welfare • Energy - hatcheries • Community 	<ul style="list-style-type: none"> • Nutrition • Grassland management • Fertility and health • Soils and nutrients • Water and environment • Supply chain structure and producer engagement 	<ul style="list-style-type: none"> • Feed • Animal welfare • Environment • Ethical labour • Carbon 	<ul style="list-style-type: none"> • Feed • Animal welfare • Enrichment • Litter quality • Heating / ventilation 	<ul style="list-style-type: none"> • Animal health • Water quality • Outcome scores (injuries, health status) • Antibiotic use • Feed (but not addressing in short/medium term)





Agriculture is diverse and consequently there is no single solution to the sustainability challenges we face, nor just one approach to helping to drive change.

In the produce sector, we tend to have close direct contact with growers throughout the year and so our activity is driven through specific projects that individual growers are undertaking, with best practice being shared between growers within supply groups or through ongoing dialogue.

2015 saw our new Select Farm Field to Fork standards embedded in the supply chain, which now cover a much wider range of crops and recognise all the good work that other schemes bring to farms across the world (such as Global Gap and LEAF).

Our produce Indicator Farms are continuing to monitor key sustainability indicators and specific projects continue, including a project with growers and the RSPB on pollinators, where trials are being undertaken and the findings being shared across the wider supply base. We are also exploring more about 'big data' and how it can help with crop risk and reduce uncertainty and we have established an agronomy group, which meets quarterly to debate and discuss new legislation on pesticides and the direction we should take.

The livestock sector is quite different from produce, with M&S having less direct farm contact, as the industry tends to be more extensive, and our ability to influence therefore being somewhat constrained. To enable us to drive meaningful change we have

partnered with independent adviser, FAI, who is helping us to benchmark and monitor performance, working closely with the processors that supply us. The current programme covers all the major fresh proteins raw materials including chicken, eggs (laying hens), pigs, turkeys, beef and dairy. For each species we have defined the key sustainability challenges (Figure 1) and working with our suppliers we use the following programme practices to ensure the animals coming into our supply are raised to the highest sustainability standards:

1. **Best practice baseline standards** – development of our farm standards to build on Red Tractor assurance ensures we continually go beyond industry norms and that the food animals used in our fresh products are produced more sustainably including higher welfare standards for animals, responsible and safe working conditions for staff and careful management of the environment.
2. **Outcome measure reporting** – ongoing independent monitoring of outcome measure data across our supply chains enables us to better understand the sustainability issues in supply and track progress.
3. **Research and innovation projects** – where new solutions to some of our major challenges are needed, we work with producers, scientists and industry experts to undertake scientific and commercially relevant trials to develop effective approaches that are efficient, ethically just, environmentally sound.

Figure 1. Summary of key sustainability hotspots

Species	Sustainability issues					
Chicken	Campylobacter	Antibiotic use	Genetics	Behavioural enrichment	Stocking density	Thinning
Pigs	Free farrowing	Antibiotic use	On farm health	Sustainable feed	Environmental impact	
Laying hens	Beak trimming	Bone health	Range enrichment	Sustainable feed		
Turkey	Antibiotic use	Natural light	Stocking density	Genetics		
Dairy	Herd health status	Lameness	Sustainable feed	Dairy calf welfare	Antibiotic use	Disease management
Beef	Herd health on farm	On farm efficiency	Genetics	DNA testing		

Monogastrics



Oakham Chicken

1. **Best practice baseline standards:** we have built upon our existing farm standards to require that all Select Farm fresh chicken is –
 - i. Non-thinned: We're removing the current practice of thinning (removing birds from the house on more than one occasion) that has been associated with bird stress and risks to biosecurity.
 - ii. Enriched: We're increasing the quantity of straw bales required in Oakham sheds to ensure birds have increased opportunity for natural behaviours (see Oakham Chicken Case Study).
 - iii. Leg health: We require our Select Farm producers to receive standardized training in monitoring bird walking ability to ensure that lame birds are detected and do not suffer unduly.
2. **Outcome measure reporting:** Welfare outcome measures are currently monitored on all Oakham and Free Range chicken, including information on health status of the flock, loss of birds during production and transport, leg health, injuries caused by catching and transport and antibiotic treatments. We have identified key target areas for improvement

across supply in hockburn and footpad dermatitis and are focusing suppliers on improving existing levels.

3. **Research and innovation projects:** To tackle the key hotspots identified we're working with suppliers on the following projects and interventions –
 - i. Campylobacter: On-going implementation of our 5-Point Plan approach across supply to reduce the risk of Campylobacter infection on farm
 - ii. Enrichment: Pilot trials of new objects of enrichment to support increased behavioural opportunities for chickens housed indoors
 - iii. Foot health: Pilot study to explore optimal bedding substrates to reduce the risk of footpad dermatitis in growing broiler chickens
4. **Future focus areas:**
 - i. On-going implementation of the removal of thinning
 - ii. Roll-out of new enrichment designs across the Oakham supply
 - iii. Increased understanding of differences between existing broiler breeds

Select Farm Pigs

- 1. Best practice baseline standards:** we have built upon our existing farm standards for all Select Farm fresh pork –
 - i. Breed: We're increasing the use of the traditional Hampshire breed to sire our outdoor pork production for our specialty products.
- 2. Outcome measure reporting:** Welfare outcome measures are currently monitored on all groups of Select Farm fresh pigs used by M&S, including information on health status, leg health, injuries and antibiotic treatments. To understand the environmental impact of our farms, we're also developing an approach to collect environmental outcome measures on our Select Farms, covering energy and water use, waste, soil health and biodiversity.
- 3. Research and innovation projects:** Where pork cannot be bred in free range outdoor systems due to unsuitable land, we're working with producers who are trialing indoor free-farrowing systems that allow the sow and piglets space to express their natural behaviours during farrowing and nursing.
- 4. Future focus areas:**
 - i. On-going monitoring of the performance of sows and piglets in the PigSAFE free farrowing system
 - ii. Roll-out of environmental data collection on Select Farms producing fresh pork pigs

Laying hens

- 1. Outcome measure reporting:** Welfare outcome measures are currently monitored on all UK Select Farm flocks, including information on health status of the flock, loss of birds during rearing, production and transport, feather score and antibiotic treatments.
- 2. Future focus areas:**
 - i. Increased understanding of bone health in laying hen flocks in our supply to capture existing levels and key factors of influence



Turkeys

- 1. Best practice baseline standards:** we have built upon our existing farm standards to require that all Select Farm fresh turkey has –
 - i. Increased space allowance: We have increased the amount of space required for our indoor-housed turkeys
 - ii. Provide greater enrichment and pecking objects to promote natural behaviours
- 2. Outcome measure reporting:** Welfare outcome measures are currently monitored on all Select Farm flocks, including information on health status of the flock, loss of birds during production and transport, leg health, injuries caused by catching and transport and antibiotic treatments.
- 3. Future focus areas:**
 - i. Understanding of influencing factors that affect key health and welfare outcomes across across supply



Ruminants

Dairy

1. **Best practice baseline standards:** we have reviewed our existing farm standards to require that all producers in our Fresh Milk Pool build upon the following areas -
 - i. Herd health: Building on our existing requirements to establish control programmes for the diseases BVD and Johne's. We also carefully monitor antibiotic use.
 - ii. Feed: Expansion of our sustainable sourcing policy to require no inclusion of Palm oil in feeds.
 - iii. Enrichment: We require all our fresh milk producers to provide access to grazing for their herds and we encourage our producers to offer cow brushes to the herd in the indoor environment.
 - iv. We have introduced a sustainability scorecard focused on staff management, community engagement and environmental performance.
2. **Outcome measures:** Our producers receive an annual independent health and welfare audit by a specialist vet, from the Royal Veterinary College, who works closely with farmers and their vets throughout the year to focus on key issues such as mastitis, lameness, disease prevention and cow comfort.

3. Future focus areas:

- i. Our on-going health and welfare auditing targets improvement in herd-specific outcomes across each individual farm within the pool

Beef

1. **Best practice baseline standards:** we have reviewed our existing farm standards to require that all Select Farm producers implement the following -
 - i. Breed: All our fresh and ingredient beef production comes from steers and heifers sired by a recognised beef breed and under 36 months of age. We have also implemented a testing programme at slaughter to verify beef quality and provenance
 - ii. Environmental protection: We encourage all our producers to regularly review outcome measures on nutrition, welfare and performance to inform management decisions on the farm
2. **Outcome measure reporting:** Welfare outcome measures are being collected on M&S Select Farm fresh animals at abattoir level, including information on health status, injuries and welfare at the time of transport and slaughter.





Education

We remain firmly committed to our education programme, which received recognition last year when our Agricultural Leadership Programme was selected as a finalist in the Business in the Community Responsible Business Awards.

This programme, developed and run with the world-renowned business school at Cranfield University, continues to gain momentum, with a further course having been held in February 2016. To date some 70 delegates have attended this unique programme, which has been held on five separate occasions since it was launched in 2013.

The cohorts continue to comprise a diverse range of delegates from a variety of sectors, with each course intake including producers, processors, suppliers and M&S staff. There have also been delegates from overseas. The programme has always attracted extremely positive feedback, with this year attracting the highest scoring feedback to date:

Rate overall programme	98%
Personal expectations met	94%
Rate extent you would recommend to colleagues	98%
Promoted new ways of thinking	98%
Confidence to try new things/ do things differently in current role	94%
Relevance to job/ career over longer term	94%

In addition to this key initiative, we have continued to support young farmers in Scotland via our sponsorship of a specific class within the annual Fatstock Show, providing young people with the opportunity to walk the M&S beef supply chain and improve their understanding of the industry from field to fork. The winners of the class were hosted on an educational trip to the Eurotier exhibition in Germany.

We have also continued to support students at Greenmount College in Northern Ireland, who complete a project set by M&S and Linden Foods as part of their degree studies, having undertaken a walk the supply chain day. Students present their project to a panel from M&S and Linden, with the winning team visiting M&S at Waterside to spend a day with buyers, agricultural managers, product developers and technologists to improve their knowledge of the issues and challenges around food production and retail.

We are also supporting aquaculture apprenticeships in collaboration with the University of the Highlands and Islands and Scottish Sea Farms. These apprenticeships give participants access to the retail supply chain as well as the core aquaculture skills that they need, improving their awareness of customer requirements and consumer trends.

Engagement activity

Agricultural and trade shows

We attended a number of major regional agricultural shows over the summer months of 2015 to spread our messages about sustainable farming to our customers and to meet and engage with our producers. Shows we attended include:

- Balmoral Show, Belfast, Northern Ireland
- Royal Highland Show, Edinburgh, Scotland
- Great Yorkshire Show, Harrogate, England
- Royal Welsh Agricultural Show, Builth Wells, Wales
- Fruitlogistica, Berlin, Germany
- Livestock Event, Birmingham

This programme will continue in 2016, although rather than attending the Great Yorkshire Show we will attend Countryfile Live in Oxfordshire.

Farming for the Future awards

To support the show programme we have continued to run an awards scheme for M&S producers and suppliers. This encourages farmers and growers within the supply chain to share best practice and highlights the benefits of sustainability. In 2015, the awards attracted high quality entries from across the globe and culminated in nine regional winners, an overseas winner and our Champion of Champions, Brian Moralee, a tomato grower from Wight Salads. Brian was recognised by judges for being a really innovative grower, committed to farming in an environmentally sensitive way and 'doing the right thing' both inside and outside of his glasshouses. He particularly attracted attention for his focus on soil health and energy use, and won a free place on our Agricultural Leadership Programme.

Our awards continue in 2016, with a new collaboration with The Prince's Countryside Fund for a regional award for contribution to rural communities, in addition to the three categories – Young farmer, Outstanding producer and Innovation – that we launched in 2015. Finalists will be selected for each region in advance of the relevant agricultural shows.

Influencer/ NGO briefings

During the last twelve months our programme of influencer briefings has continued.

Our agriculture and agronomy teams have regular meetings with many of the key influencers in their sectors, and we actively engage with government (including devolved governments) on sustainability and industry issues.

Producer communication

Recognising that technology increasingly plays a part in effective communication we have developed a new online farming information portal as part of a wider project to engage suppliers with Plan A. This has recently been launched to farmers and growers and provides a central hub where relevant information and case studies can be accessed.

Producer meetings

Producer meetings continue to be a key part of our day-to-day implementation of Farming for the Future. As well as discussing operational and technical matters, these meetings provide an opportunity to discuss sustainability and the activity going on within the Farming for the Future programme. They also enable face-to-face discussion and knowledge transfer between M&S and producers and between individual producers.

Industry engagement

We continue to engage with the wider industry, through direct contact and via support of industry initiatives. We routinely attend major industry events and M&S team members have also spoken at a number of key industry conferences. We have also held face to face meetings with the farming unions, levy boards, red tractor assurance, CIWF, WWF, Prince's Countryside Fund, Defra, Scottish Government, Welsh Assembly Government, Food Standards Authority and RSPCA.

Sponsorship activity


The business continues to make use of strategic sponsorship opportunities. In the last twelve months these have included the LEAF Open Farm Sunday and involvement in the Prince's Countryside Fund. We also sponsor major livestock classes at the agricultural shows we attend and sessions at the Oxford Farming Conference and the NFU Conference.

External relationships

Our most important external relationships in the delivery of our Farming for the Future activity are with suppliers, and their input and support in delivering change is vital to future success. We work closely with FAI on animal welfare issues and with LEAF on integrated farm management.

Case Study

First carbon neutral poultry farm in Northern Ireland



“I believe that sustainability is key to success in farming and the future of agriculture.”

Farming as sustainably as possible has always been the goal for chicken farmer Graham McIlroy.

Graham farms in Co. Derry, Northern Ireland, where he produces 600,000 broilers a year for M&S chicken supplier, Moy Park

The family farm used to focus on sheep and beef production, but when Graham started farming in 2009, the decision was made to switch to rearing chickens and soon after, McIlroy's Chickens was established.

Considering that Graham had never set foot in a chicken house before, it was a big commitment to make and the challenge that Graham faced was made even greater by his determination to make the new chicken enterprise as sustainable as possible and utilise renewable energy sources to minimise the farm's carbon footprint.

In 2009, the first state of the art chicken house was established on the farm, with one more built in 2012 and the most recent addition finished in 2013. All three of the houses at McIlroy's Chickens use solar and biomass generated energy and are carbon neutral in terms of energy inputs; a first for Northern Ireland.

The chicken houses are a testament to Graham's commitment to sustainable practices, and he doesn't plan to stop innovating any time soon.

Graham is already looking to further improve the sustainability credentials of McIlroy's Chickens by implementing new technology on the farm. He is currently

investigating the feasibility of installing solar battery pack systems on the farm's chicken houses, so that excess energy produced by PV solar panels can be stored for future use, rather than being fed back into the National Grid.

“I am continually researching ways for my business to become even more sustainable,” concluded Graham. “Not only will this help to improve my business margins, but more importantly, leaves a better world for future generations. I believe that sustainability is key to success in farming and the future of agriculture.”

Case Study

Innovation cuts fuel bill and improves vegetable yields



Innovative use of technology and a new approach to ploughing have enabled M&S vegetable supplier, Barfoots Ltd, to reduce diesel fuel consumption, improve soil quality and improve crop yields by 15 per cent. Barfoots technical director, Keston Williams, explains how...

Traditionally, every year, new earth 'roads' were designated across our farms and fields to enable tractors to access crop growing areas, whilst limiting the damage that these movements had on cultivated land.

Eventually, these roads would expand and become so compacted that they needed to be ripped up by a subsoiler; a process that is very energy intensive and requires the use of lots of diesel fuel. This compaction/subsoiling routine was also having a negative impact on soil structure and quality.

In response, we launched a new Controlled Traffic system on our farms, which utilises Global Positioning Systems (GPS) to minimise the soil damage that vehicle movements create.

All Barfoots tractors have now been fitted with GPS self-steering gear, which enables a machine to be guided to within 1cm on a pre-programmed route around, and in, growing areas. By keeping these precise

routes in exactly the same place every year, the traditional subsoiling process doesn't need to take place.

The new Controlled Traffic system has required a significant investment of more than £400,000 on new machinery over the past three years, as all equipment – including sprayers, drills and cultivation equipment – needed to fit into the specified Controlled Traffic routes.

We have also evaluated our ploughing methods and now use a top down cultivator when tilling soil, which is more energy efficient than traditional methods, and doesn't create a plough pan. This has helped us preserve soil composition, quality and biodiversity, as well as further reduce fuel usage.

By controlling vehicles movements, changing ploughing technique and limiting subsoiling operations, we have been able to make a massive 60 percent reduction in diesel usage as a business.



The reduction in soil compaction and soil disturbance that has resulted from our innovations has also had a beneficial impact on soil biodiversity on farm. Worm numbers have increased to more than 15 times to what they were prior to our changes and, without a plough pan inhibiting root penetration, crops are performing much better. Overall, crop yields increased by 15 percent in the 2015 growing systems, which is fantastic progress.

Case Study

Saving the corn bunting population

The corn bunting population has been rapidly declining in Scotland in recent years with one study showing an 83% decline in singing males between 1989 and 2007. However, conservation work over the last seven years has stabilised the population, mainly thanks to farmers planting cereal based wild bird seed mixes to provide habitats and winter food sources for the species.



To widen the benefit of this work even further, the RSPB has been working with Kettle Produce Ltd and its growers and M&S on a project to roll out a seed mix that not only helps the corn bunting population, but also provides additional pollen and nectar rich food sources to encourage pollinators and other beneficial farmland insects into the crop. The project has been supported by M&S through the Farming for the Future Innovation Fund, contributing £45,000 over three years.

The project began in 2014 on four Kettle Produce farms in Fife, using the new 'bunting and bee mix' across a total of 7 hectares of land. With the help of the Bumblebee Conservation Trust, the RSPB carried out both bird and pollinator surveys on

the participating farms and noted some significant positive results:

- 229% more pollinators were found using the seed mix compared to any other commercial crop grown on the farms in 2015 and 131% more were found in 2014
- Bird numbers were up on all farms in 2015 compared to the previous year
- A minimum of 5 types of bumblebees were found alongside a large variety of hoverflies and other insects, including ladybirds and other beetles, ladybird larvae, lacewings, spiders and wasps
- Crops were used for nesting, winter feeding and insect foraging by a variety of birds including corn bunting, yellowhammer, tree and house sparrows, linnets, reed bunting and others

The results of this project have led to the Fife Environment Trust including the 'bunting and bee mix' in 50% of the seed mixes for a proposed funding bid to plant 40+hectares of seed mix as part of a wider corn bunting recovery project. This would, therefore, lead to an increase of the bunting and bee mix areas in Fife by at least 20ha.

The trialed seed mix is also very popular with farmers and land owners, with one farmer having committed to grow an additional hectare of the bee and bunting mix next year, mentioning the benefit to bumblebees as the main driver.

Future plans for the project include enhancing the mix further to attract more butterflies, along with increasing advisory support for farmers.



Case Study

The Sustainable Strawberry project

The Sustainable Strawberry project was launched by Total Berry and M&S in 2014, to address the challenges that threaten the future of growing high quality strawberries in the UK. The aim was to trial an innovative production model that could future proof itself against rising costs, manage critical resources sustainably, as well as maximising quality and yield.



At the end of the first year, the project already began to identify some significant benefits compared to conventional tunnel production including:

- 22% increase in yield/Ha
- More efficient and productive use of land using a double-tiered table top system
- Reduction in labour costs by removing the need for manual venting (at least £3323/Ha/year)
- Improved quality by managing the internal environment - 96% class 1 achieved compared to 87% class 1 from a tunnel crop



Supported by the M&S Farming for the Future Innovation Fund, the project saw the construction of a Cravo Rafter House - a technologically advanced structure capable of manipulating the internal environment automatically through individually retractable roof and wall panels. Within this space, a wide variety of trials began to take place, looking at everything from the Cravo system itself, to other variables such as different growing mediums and row configurations. In contrast to conventional tunnels that need replacing every three years, the Cravo system is guaranteed for ten and also requires less maintenance than the traditional tunnels used in the UK.

In 2015, further trials were implemented looking at other areas of the growing process, whilst also building on and validating the previous year's work. To date the project has proved that using a retractable roof has the potential to deliver multiple benefits, potentially helping to secure the financial stability of M&S Strawberry supply, whilst maximising the potential quality & yield of M&S approved Strawberry varieties.





Plan **A** 2020