



LINKING ENVIRONMENT AND FARMING

# Simply Sustainable Plastics

Six simple steps to  
more environmentally  
responsible on-farm plastic  
management





“Use it up, wear it out, make it do, or do without!”

Boyd K. Packer



*This booklet has been developed by LEAF with particular thanks to:*



Environment  
Agency



Farrington's  
**mellow  
yellow**

  
**Ragley**

# Foreword

Plastics are everywhere on farms. From greenhouses, polytunnels, silage wrap, mulching, plastic reservoirs and irrigation systems, their presence is all pervasive across all agricultural sectors. Whilst there are benefits of plastics in producing and protecting food, most are still single-use and pose a serious risk of pollution and harm to human and ecosystem health.

Farmers have made significant strides in the past decade to recycle and reuse plastics wherever possible, but there is still an urgent need for smarter management in plastic waste, to minimise the many tonnes that are used on-farm each year.

So how can we produce more food sustainably whilst using less plastic? LEAF is delighted to have developed this booklet as part of our Simply Sustainable Series. It outlines cost effective and practical ways to manage your plastics in more environmentally responsible ways.

The booklet takes you through six simple steps which can be incorporated into your farming system and as part of Integrated Farm Management (IFM). They cover usage of plastic, waste management practices, and future actions, all of which together form part of a wider Plastic Waste Audit and Action Plan, helping you monitor your progress on an annual basis.

LEAF share a common concern about plastic waste in the environment. Providing more sustainable solutions for plastic used across agriculture is a big priority. By embracing new innovations and adopting practices that avoid plastic use, substituting products with sustainable alternatives and promoting a more circular approach, the farming sector can deliver the changes required.



*Caroline Drummond MBE,  
Chief Executive, LEAF*

# Introduction

Plastic and elastic materials are widely used in the agricultural industry. Elastic materials, such as rubber, have the ability to revert back to their original state. Plastics such as silage wrap and mulches, on the other hand, will not stretch and cannot be shaped back to their original form, making it difficult for the material to breakdown easily.

The agricultural industry's adoption of plastic has gradually increased within the last few decades, due to the fact that it is inexpensive and lightweight, offering simple and often cheap solutions. Its many uses include extending growing seasons, protecting products from spoilage on-farm, reducing the need for herbicide applications, preserving livestock feeds, and reducing water loss.

Single-use plastics, and subsequent plastic pollution, through micro-plastics found in soils and oceans, have also become a pressing environmental concern particularly as they are somewhat the 'hidden pollutant' - naked to the human eye.

As part of LEAF's Simply Sustainable Series, this booklet will help you to identify and manage the plastic waste streams within your business by devising plans and monitoring your plastic use on-farm. Additionally, it will offer you an insight into the impacts of plastics and the various farming practices that are currently being adopted, working towards a more plastic neutral environment.

**“The only solution to our terrible plastic problem is preventing plastic from entering the ocean in the first place. The good news is that this can be accomplished with improved waste management systems and new improved technology.”**

**Sir David Attenborough**



# Plastics in agriculture

World agriculture used 12.5 million tonnes of plastic for plant and animal production  
(FAO Report, 2019)

Typically, a 320-hectare farm produces 1.5 tonnes of plastic waste each year, most of which can be recycled  
(Countryside Classroom, 2021)

It is estimated that only 30% of used non-packaging agricultural plastics are being collected in the UK  
(APE UK, 2021)

More than 80% of the plastics found in marine environments has been produced, consumed and disposed of on land  
(Institute for European Environmental Policy, 2019)

Global demand for products such as plastic mulch and silage film is expected to rise by 50% by 2030  
(FAO Report, 2019)

Microplastics are synthetic, water-insoluble polymers which are 5mm or smaller in size. They are now considered a significant pollutant within water, soil & air  
(National Geographic, 2020)

# Integrated Farm Management

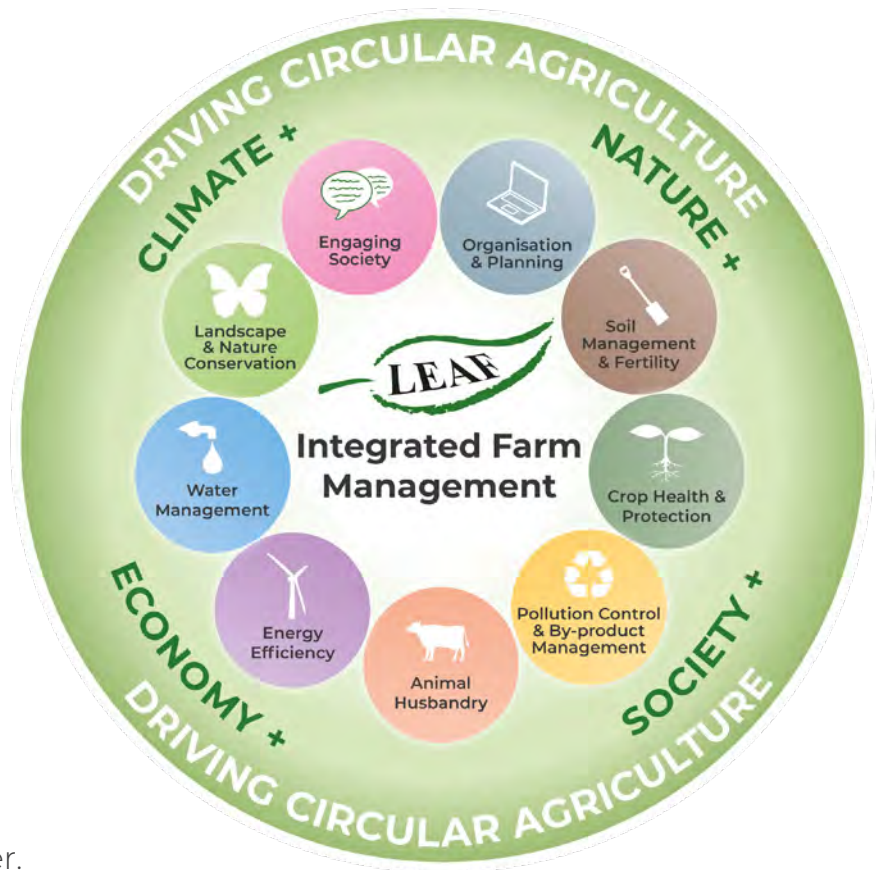
Integrated Farm Management (IFM) is a whole farm business approach that delivers more sustainable farming.

Decision making on farm is not based on single issues and IFM supports farmers in identifying the most appropriate decisions in an integrated manner.

IFM is geared towards sustaining and optimising the use of all resources on farm, including soil, water, air, staff, machinery, capital, Plant Protection Products (PPP), wildlife habitats, and landscape features. It aims to address regulation and embrace innovation, with its successful uptake requiring a detailed understanding of the business and a challenging and forward-thinking approach.

The implementation of IFM is built around smart management that embraces the best of beneficial husbandry principles and traditional methods. A risk management approach is also developed to anticipate, assess, manage, and develop contingency plans for any unplanned events.

Whilst each area of IFM is interrelated, the use of plastics in agriculture falls under the IFM principle of Pollution Control and By-product Management, whilst integrating specifically with organisation and planning, landscape and nature conservation, and community engagement.



# Getting started

This booklet is based on the principles of IFM and highlights six simple steps to help you plan and apply good practices for reducing plastic waste, whilst creating a more sustainable environment.

## Six simple steps for managing your plastic waste on-farm...

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# Step 1 - Record

## Recording and monitoring your plastic waste streams

Your first step of the Simply Sustainable Plastics journey is to record all your plastic waste that is used on the farm, in the shape of an audit. A Plastic Waste Audit is a valuable tool for monitoring plastic waste streams on-farm whilst also identifying areas where plastic use could be reduced. The audit determines where plastic waste is created, the quantity of plastic used and the key areas for improvement.

### **Here are a few ideas on how to begin your audit:**

Assign the role to a member of staff/contractor if you do not have time to do it yourself; get everyone involved and aware of how much plastic is being used and brought onto the farm.

Make a list of the various locations on farm to inspect– suggested locations (depending on the enterprise) include:

- Outbuildings
- Chemical store
- Vehicles
- Polytunnels
- Yard
- Lambing and calving sheds
- Office

Using the example template on the next page for guidance, create your own audit to take out on to the farm.



Plastic Waste Audit (example)				
Farm:				
Person Responsible:				
Date	Identification of plastic waste	Location	Quantity	Disposal method
01/03/22	Seed bags	Barn	30 tonne bags	Recycle
01/03/22	Silage wrap	Outside	60 bales	Collection and recovery scheme
01/03/22	Plastic buckets	Calf shed	20	Reuse

Now that you have created your audit, take a walk around the farm in your specified locations and monitor all the plastic material that is used as well as the quantities. By doing so, this will provide you with an understanding of how much plastic is being used on the farm and what current methods of waste management are in place.

Try to get everyone involved with the audit, it may be worth assigning specific members of staff/contractors to manage different waste streams and share positive messages about recycling.

Remember that managing waste is a key factor of profitability; improved resource use helps to minimise costs and reduces the risk of pollution.

## Plastic Waste Action Plan

Now that you have identified the plastic use around the farm, the next step is to set out short-term and long-term actions on how to manage waste within a Plastic Waste Action Plan. These can include on-farm practices of reusing, reducing, replacing, and recycling.

The action plan can be used to identify areas of improvement and by setting clear targets, how plastic waste can be reduced. The action plan should be updated annually, and it can be used to benchmark improvements on an annual basis. Be sure to check current policies and regulations concerning plastic waste management by contacting your local suppliers or online via a government-based website

Plastic Waste Action Plan (example)			
Farm:			
Plastic waste	Planned action	Action frequency	Person Responsible
Silage wrap	Contact a recycling company	Monthly collection	
200 litre 'drum'	Reuse as feed troughs and water containers	As required	
Plastic feed bags	Contact a recycling company	Monthly collection	
Plastic mineral containers	Reuse as feed and water buckets but make sure they are not left outside to degrade	As required	

By completing the Plastic Waste Audit and Action Plan and taking further action, efficiency can be improved within the farming system as well as the environment. Furthermore, it will also help to minimise costs if waste can be recycled effectively. You have legal responsibilities under the [Waste Duty of Care](#) to keep waste to a minimum by reusing, recycling, and recovering waste (Environment Agency). These practices should all be included within your Plastic Waste Action Plan.

Step 1 'Record' Score	Indicator		
	Poor (0)	Medium (1)	Good (2)
a) Plastic Waste Audit	No written identification of plastic waste streams	Some plastic waste streams identified and recorded on a Plastic Waste Audit	Fully detailed Plastic Waste Audit, which is regularly updated
b) Plastic Waste Action Plan	No written Plastic Waste Action Plan	Some targets set in a Plastic Waste Action Plan but not yet achieved	Fully detailed Plastic Waste Action Plan in place with achievable targets



# Step 2 - Reduce

Having developed your Plastic Waste Audit and Action Plan, you should now be able to identify areas where it could be reduced on-farm. This is the second step of the process. Review your key management strategies for reducing plastic waste and set yourself some achievable targets in your Action Plan.

Below are some simple practices that can help you reduce the quantity of your plastic:

- Implementing Integrated Farm Management (IFM) can help reduce inputs, including fertilisers, medicines and plant protection products through improved efficiency and precision.
- Bulk buying helps to reduce packaging and transport costs whilst also minimising your carbon footprint. This could be achieved by working with neighbouring businesses if you cannot justify buying large quantities.
- Keeping the farm site tidy and clean can help to reduce unsightly waste and plastic pollution on site.
- Signs and posters can help to ensure employees and the public are informed about where to deposit their waste.
- Choosing responsible suppliers who are using reusable, refillable or recyclable packaging.
- Recycling centres and networks will provide you with information and guidance on how to sort different types of plastic and where to recycle them.

The increase in demand for plastic has also led to other challenges in the agricultural industry. Rural fly tipping has become a huge problem, with many single-use plastics being dumped on productive farmland. Not only does this have a financial implication, but it also has an impact on the environment as microplastics can remain in the soil from the degradation of these plastic materials. This causes a considerable amount of damage to the ecosystem and microbial flora and fauna.

Primary microplastics can also be found in some fertiliser granules, encapsulated seeds, and soil conditioners, so it is worth considering other alternatives or reducing your application rates, if possible.

Additionally, there are many biodegradable, water-soluble products available in the market now, so it is definitely worthwhile checking with your suppliers about new products.

Step 2 'Reduce' Score	Indicator		
	Poor (0)	Medium (1)	Good (2)
c) Reduces plastics	Does not consider reducing the amount of plastic on the farm	Sometimes reduces plastic use	Aware of the adverse effects plastic has on the environment and will reduce plastic wherever possible
d) IFM practices	Does not incorporate IFM practices to help reduce plastic waste	Aware of IFM but rarely incorporates practices	Uses IFM practices frequently, to help reduce plastic waste

# Case Study:

## Ragley Home Farms

A LEAF Demonstration Farm and LEAF Marque certified business, Ragley Home Farms covers 161 hectares and is part of the Jordans Farm Partnership. Farm Manager, **Hamish Stewart**, is making a significant effort to reduce the use of plastics within both the arable and livestock enterprises. The following case study explains the different practices used to improve plastic waste management.

### Livestock enterprise

“Silage wrap as a single-use plastic has been our greatest waste material on the farm, so now we primarily use hay as our feedstuff. Although the bales still create string waste, this is fairly minimal in comparison to the plastic used to wrap the silage bales. We do not have the facilities to make clamp silage, which would reduce our plastic use even further, but large hay and silage bales work best for us and are much easier to store. We do make silage on occasions, but this is mostly weather dependent.

Supplementary feed is another input for our stock; however, we always purchase this in bulk, which goes straight into a blower wagon for storage. Thus, reducing plastic waste from bulk feed bags.”







## Arable Enterprise

“On the arable enterprise our main use of plastic is seed bags. We try to home-save seed where practical and we have most recently invested in a bulk seed trailer, to improve the efficiency of our operations. Seed dressings are applied a day prior to drilling and then the seed is stored in the bulk trailer. This has created a ‘just-in-time’ seed system and allows us to maximise storage space and further minimise waste from plastic bags.

We have also reduced our use of fertiliser bags, moving away from solid based nitrogen to a combination of liquid concentrated fertilisers, ammonium sulphate fertilisers and digestate. The move to liquid will reduce the amount of plastic that comes from the packaging and minimise the risk of microplastics entering our soils. Through an integrated approach, we try to optimise our essential inputs through targeted applications and only use what is needed.

Plastic has become so entwined in everything we do; it is hard to get away from it. However, there are lots of little details we can change on-farm to make a difference. Systems that make things easier can only help drive a more sustainable environment.”



# Step 3 - Reuse

Now you have identified and incorporated practices for reducing plastics on your farm, begin to look at how plastics can be reused. Reusing plastic can help minimise the amount of plastic waste on-farm. Plastic is a material that is designed to be long-lasting, and, in some cases, the material can have an alternative purpose. This can be beneficial to your business, firstly by saving costs on purchasing new materials and secondly by extending the life of the materials you already have.

Plastic items that can be reused on the farm include plastic drums, bulky seed and fertiliser bags, plant pots and packaging materials. It is always worth checking to see if plastic can be used elsewhere or upcycled for a new purpose. However, always make sure the product is safe to be reused. Take a mineral bucket as an example, if it is left outside then the plastic will gradually start to degrade and will not be suitable for reuse.

Plastic mulches and sheets for silage clamps may also be reused if they are removed carefully, avoiding soil contamination and damage. It may be possible to use crop fleece, mesh covers and sheets for more than two seasons in a row, particularly if they are in good condition.



## Cleaning and storage

Consider biosecurity when reusing plastics. Collect, clean, dry, and separate different kinds of plastic and store them in a dry and secure place until the time comes to reuse them. This will avoid contamination and will prevent the materials from further damage and degradation.

Make sure that you are following rules and regulations concerning hazardous waste. Encourage staff and contractors to collect plastics in a responsible manner, some of these plastics may then be repurposed if cleaned and stored appropriately.

Step 3 'Reuse' Score	Indicator		
	Poor (0)	Medium (1)	Good (2)
e) Reuses plastics	Rarely reuses plastics	Sometimes reuses plastic	Reuses plastics wherever possible
f) Cleans plastics to reuse again	Does not consider cleaning plastics for reuse	Occasionally cleans plastics to reuse again	Frequently cleans plastics before using them again



# Step 4 - Replace

After considering ways to reduce and reuse your plastics, you can now look at replacing any plastics that you are currently using within your farming system.

Over the last decade, there has been a strong spotlight on the use of plastics, especially single-use plastics, and their everlasting impact on the environment. Through further research and innovation, more sustainable plastic alternatives have been developed with the option of replacing the more conventional plastics on-farm, via packaging or biodegradable and compostable options.

## Alternative packaging

Finding alternative packaging is an initiative-taking step for a business that wishes to make a difference. Practical packing materials such as paper, glass, cans, or cardboard can be used as alternative materials. By experimenting and trialling various alternatives, the most suitable option can be found. For example, for a horticultural enterprise, black plastic pots can be changed to biodegradable pots, which can then be fully recycled. Some businesses have already moved towards alternative packaging materials, which gives their products a unique selling point.

Furthermore, the new plastic packaging tax, enforced in April 2022, applies to plastic containing less than 30% recycled content – silage wrap is exempt.

If you still need to use packaging or plastic materials within your business, communicate to your suppliers, to find out if they can supply any alternative materials. If there is sufficient demand, further actions could be taken.

However, be aware of the secondary or indirect impacts of plastic substitutes to ensure they do not cause other unintended environmental issues. For example, using glass as packaging will reduce plastic waste, but being much heavier it will increase fuel consumption and subsequent carbon emissions during transportation. Additionally, broken glass can be a health hazard.

Impacts of these alternatives could be addressed in your Plastic Waste Action Plan to influence the decision-making process.

## Biodegradable and compostable plastics

Through innovation and research, new types of plastics are becoming more widely available in the market, including biodegradable and compostable options. These are designed to breakdown in industrial composting systems and provide a more sustainable based material to fossil fuel driven plastics.

There are many forms of plastics, including polysaccharides in the form of starch and cellulose, bacteria-based plastics, and lignin plastics. Most of these materials will biodegrade effectively and it is worth considering whether their different properties and uses are compatible with your farming system.

Raw and natural fibres are also used in the creation of bioplastics, which provide sustainable alternatives to conventional plastics that are dependent on fossil fuels. Some of the fibres which are used include hemp, wool, and seaweed, with many other biological materials being investigated. Further research and analysis are needed to assess the longevity and effects of bioplastics on-farm in greater depth.

Using your Plastic Waste Audit as a reference, determine whether any of your current plastics on farm could be replaced by compostable or biodegradable options. It may be worthwhile communicating with other farmers or even your suppliers to discuss new innovations and the positive impacts on-farm.

Step 4 'Replace' Score	Indicator		
	Poor (0)	Medium (1)	Good (2)
g) Plastic alternatives	Does not consider alternative materials	Begins to identify areas where alternatives to plastic could be used	Finds new alternative materials which are more environmentally friendly
h) Contacts suppliers	Not interested in contacting suppliers	Not really considered due to lack of knowledge	Willing to contact various suppliers to find the best alternative

# Case Study: Jersey Royal Company

A LEAF Demonstration Farm and LEAF Marque certified business, Jersey Royal Company is the largest farm in Jersey, farming 1500 hectares of organic potatoes. Technical agronomist, **Simon Hammond** explains the innovative yet simple ways of how the company are reducing plastic waste.

“Over the last few years, we have reduced the area that we cover with plastic, for protecting our potatoes, by approximately 150Ha (20%). The plastic that is used is reused at least twice before being shipped back to the UK and recycled. We are also looking at sustainable and biodegradable alternatives but have not yet found anything that would work for us”.







Whilst not all farmers will have a packhouse, packaging has become increasingly important.

“We have reduced the thickness of our packaging from 48µm Cast Polypropylene (CPP) and Oxidised Polyethylene (OPP) to 27>30µm Low Density Polyethylene LDPE (fully recyclable). This is an approximately 43.75% reduction in plastic.

By gradually moving from non-recyclable to recyclable materials, we are aiming to have 100% of our pre-pack packaging should be fully recyclable by next season.

We have worked with some of our customers to reduce the length of their packs to a more suitable size. This gave us a 4.5% reduction for those customers.

We stopped using tray liners in pre-pack trays. This gave us a massive reduction in this line of plastic of 96.2%. We now only use tray liners in loose trays and are trialling paper liners.

We have also managed to get all our customers onto the same width of plastic. This reduced our waste plastic at change overs and setup and reduced pre-pack waste from 10% to 2%”.



# Step 5 - Recycle

After you have progressed with Step 4 and have replaced as many plastics as possible, you can move on to recycling.

Recycling is a crucial step for driving a more circular plastics economy in agriculture. It saves on energy, preserves natural resources, minimises the amount of plastic waste going to landfill and significantly improves the surrounding environment which has positive impacts on the community.

In some instances, a recycling point may be too far to travel but by storing recyclable plastics over short periods of time, or arranging an on-site collection with a recycling scheme, you will avoid excess mileage thus reducing your carbon footprint. You could also consider sharing a collection or delivery with your neighbour to save on costs.

‘The thirteen dairy farms which provide milk to Jersey Dairy each have a waste reduction policy which is reviewed annually. One of the biggest challenges is that being an island, the majority of goods have to be imported. Therefore, each farm buys in bulk and as a cooperative, where possible, to reduce waste and transport miles.’

Jersey Dairy (LEAF Marque certified)

## Three points to consider when you are recycling:

### Cleaning is crucial

As mentioned in the six facts, agricultural waste such as silage wrap, plastic mulch, and chemical containers may be contaminated with soil, plant residue, chemical residue, or rainwater after it has been used. These contaminants can account for 50% of the overall weight of the material. It is important that the plastic is cleaned effectively and maintained in good condition, so that it is accepted into the recycling system.

Advice from Defra emphasises the importance of cleaning chemical containers effectively to avoid further contamination. Make use of pressure rinsing devices on sprayers, ensuring that clean water is used to rinse out containers. Ensure you are up to date with the current legislation.

### Storing plastics securely

After you have cleaned your plastic waste (where practical), next consider where you are going to store it. Plastic waste can be damaged by UV radiation and can be blown around the farm by high winds or by waste being dumped on site. Storing your waste in a dry, clean, and secure area will preserve it from the elements and allow you to monitor your waste streams in an efficient manner, whilst helping you to complete your Plastic Waste Audit.

It is essential to check what is classified as [hazardous waste](#), so it can be bagged and stored separately for collection by the appropriate recycling organisation. Be sure to check the regulatory guidelines to verify how the waste is classified with the subsequent disposal method.

Even the smallest of changes to plastic management can be effective. Introducing more recycling bins on site, particularly in staff communal areas, will encourage recycling and preserve the environment.



# Collection Schemes

There are national waste collection schemes across the UK, and similar systems across the world. They involve a waste collector either collecting direct from the farm or from a collection centre to which waste can be transported. These centres usually deal with many types of agricultural wastes, not just plastics.

Agri-plastic recycling schemes and initiatives have grown in popularity and adoptability over the years, supporting farmers with more sustainable solutions to plastic waste management.

Step 4 'Recycle' Score	Indicator		
	Poor (0)	Medium (1)	Good (2)
i) Cleaning	No specific cleaning is done prior to recycling	Occasionally cleans plastic before recycling	Always cleans plastic before recycling
j) Storage	Does not separate different plastics	Understands the basic separation and storage of plastic waste	Separates and stores plastic waste in a clean, dry, and secure area
k) Collection	Rarely deals with plastic waste on the farm	Aware of recycling schemes and networks available	Participates in a plastic waste collection scheme and organises collection when necessary



# Case Study: Farrington Oils

Bottom Farm is a 295-hectare arable farm and is both a LEAF Demonstration Farm and LEAF Marque certified. The rapeseed harvested on the farm is used for the production of cold pressed rapeseed oil. Farrington's Mellow Yellow Rapeseed Oil is the world's first food product to be certified as both carbon and plastic neutral. Managing Director, **Duncan Farrington** explains how this was achieved:



"Farrington Oils became certified as plastic neutral in January 2020 by working with [rePurpose Global](#).

We use plastic with as much recycled content as possible. But there is always more to be done. Firstly, we calculated our plastic footprint by working out the total weight of every piece of plastic that we send out in a year, from the plastic pourer in our glass bottles, to the plastic wrap that our pallets are wrapped in when sent to the supermarkets. The next step was to fund the removal of an equivalent weight of plastic waste from the environment with rePurpose Global.

rePurpose Global is the world's leading plastic action platform. They work with impact projects all around the world, from low-value plastic recovery to marine plastic recovery to eliminate as much plastic from nature as possible. We fund a recycling facility in Hyderabad, India which tackles low-value, multi-laminate plastic waste that would otherwise severely clog the city's landfills.

Becoming Certified Plastic Neutral made it clear that sustainability isn't something we just talk about. The consumer and media response was overwhelmingly positive, and our products are now even more appealing because of rePurpose Global."



# Step 6 - Review

Review your Plastic Waste Audit and Action Plan on an annual basis and update each document with your current practices of reducing, reusing, replacing, and recycling. Set yourself targets for the following year to highlight the developments of your plastic waste management strategies.

Key questions to consider when reviewing your Plastic Waste Action Plan:

- Are any of your plastics going to landfill? If so, can the amount be reduced?
- In what areas can you further reduce the amount of plastic waste?
- In what areas can you reuse plastics?
- Are there any opportunities to source alternative materials?
- Is any remaining plastic waste recycled?
- Have you made progress on your actions from the previous year?

By regularly evaluating your plastic waste management approaches you are contributing to reducing plastic pollution and the overall reliance on fossil fuel-based plastics. Furthermore, this links back to IFM through managing the environment effectively, reusing, recycling, and replacing plastics as much as possible. This in turn, drives a more circular plastics economy which will have positive effects on future environmental, economic, and social sustainability.

Step 4 'Review' Score	Indicator		
	Poor (0)	Medium (1)	Good (2)
I) Reviews Waste Audit & Action Plan	Information from previous activities not acted upon	Information from previous actions is used to make changes	Full yearly evaluation to review and improve reducing plastic waste on-farm

# The future of plastics?

Significant changes to minimise plastic use need to be adopted on-farm to address environmental concerns on burying, burning, and sending plastics to landfill. Plastic production from non-renewable sources continues to rise, bringing subsequent consequences to the environment. Moreover, the accumulation of microplastics in our terrestrial and marine ecosystems is becoming a huge problem, with particles ending up in the food chain and affecting human health.

However, there is hope for a more plastic-free environment. New research and innovations are being developed across the world to overcome the issues of plastic waste. Technologies are available that can recycle the unrecyclable, (Future Planet, 2021) leading to a breakthrough in plastic waste management, whilst new plastic alternatives are providing more sustainable options. This is an exciting time for the agricultural industry, with new possibilities and opportunities to improve the management of plastic waste on-farm.

In addition to technological advances, public engagement and awareness are important for shaping behaviours and attitudes towards plastic waste management. Moreover, there are many initiatives currently working towards a more sustainable future for plastics, whether it be to eliminate problematic materials or to find alternatives which serve the same purpose.

As stewards of the land, farmers and growers can collaborate with the wider agricultural industry to reduce, replace, reuse, and recycle wherever possible; engaging with local communities and highlighting good agricultural practice to inspire responsibility and drive innovative ideas for a more plastic neutral environment.



# Your plastics score!

Now that you have carried out the Simply Sustainable Plastics six simple steps, how did you do? Complete the table below to get an idea of how well you are managing your plastic waste streams. Target any areas where you score lower and revisit your score on an annual basis. These are the first steps to developing a more sustainable plastic strategy for your business.

Overall score for your business:      Poor: 0 – 5      Medium: 6 – 10      Good: 11+

Indicator	Score	Value			Action to taken
		Year 1	Year 2	Year 3	
Step 1 - Record					
Plastic Waste Audit	(a)				
Plastic Waste Action Plan	(b)				
Step 1 Total	(a+b)/2				
Step 2 - Reduce					
Reducing plastics	(c)				
IFM practices	(d)				
Step 2 Total	(c+d)/2				
Step 3 -Reuse					
Reusing plastics	(e)				
Cleaning plastics	(f)				
Step 3 Total	(e+f)/2				
Step 4 - Replace					
Using plastic alternatives	(g)				
Contacting suppliers	(h)				
Step 4 Total	(g+h)/2				
Step 5 - Recycle					
Cleaning	(i)				
Storage	(j)				
Collection	(k)				
Step 5 Total	(i+j+k)/3				
Step 6 - Review					
Reviewing plans	(l)				
Step 6 Total	(l)				
Overall Total					

# Plastic Waste Management Checklist

This checklist can be used to help you achieve your Plastic Waste Audit and identify areas in which you can reduce, reuse, replace and recycle. This checklist is split into arable, livestock, and horticultural enterprises for more specific suggestions.

## Arable

Do you?	Please tick
Reuse seed/ fertiliser bags	
Clean, dry and store waste undercover	
Purchase inputs in bulk	
Contact your supplier and discuss whether they can use alternative materials to plastics	
Find larger containers to store inputs	
Contact your supplier to ask about circular transfer systems where you can return bags or other products to be reused again	
Reduce the amount of fertiliser required by implementing effective nutrient management and adopting Integrated Farm Management principles	
Consider increasing liquid fertiliser use to reduce the number of fertiliser bags IMPORTANT: Storage for liquid fertiliser must be sufficient and bunded to prevent leakage and environmental pollution	
Implement Integrated Pest Management to reduce product use, and therefore the plastic used. (See Simply Sustainable Integrated Pest Management)	



## Livestock

Do you?	Please tick
Switch from wrapped silage to clamp silage (if you have the facilities)	
Minimise the amount of wrap used per bale	
Switch to hay to eliminate the use of polyethylene wrap, (where practical)	
Purchase inputs in bulk	
Reuse feed bags where possible for other applications	
Discuss with your supplier whether they can recycle your packaging	
Contact your supplier and discuss whether they can use alternative materials to plastics	
Produce feed on-farm to reduce packaging from bought-in feed	
Ensure that hazardous waste is bagged and stored safely- exchanged for a Hazardous Waste Consignment Note	
Ensure that medicine and medical equipment is only used when it is required, especially by implementing responsible antibiotic use*	
Consider alternative materials for packaging (biodegradable or compostable options)	

\*IMPORTANT: Animal health and welfare must remain at a high standard. Therefore, if an animal requires medical assistance or medicine, it should be administered as a priority. The medical waste must be dealt with in accordance with your specific country's requirements.



## Horticulture

Do you?	Please tick
Use organic materials, such as straw for mulches	
Use biodegradable or compostable plastic mulches which can be incorporated back into the soil	
Collect the mulch for re-use, ensure it is cleaned, dried, and stored correctly for reuse or disposal	
Source plant pots and trays made from recycled plastic, whilst avoiding black pots	
Source biodegradable pots and trays which are made from fibrous materials such as rice husk, coconut husk, paper or straw which degrade into the soil	
Minimise the amount of fleece or mulch applied on your crops	
Remove plastic mulches and crop fleeces carefully after use	
Buy inputs in bulk	
Contact your supplier and discuss whether they can use alternative materials to plastics	
Discuss with your supplier about using biodegradable string to support plants. Currently there are maize starch options available	
Source biological controls for Integrated Pest Management that are contained in compostable plastic bottles or bags	



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# Further information

Here is a wide range of information that may be useful regarding plastic use in agriculture:

[Assessment of Agricultural Plastics and their Sustainability](#)

[UK Government Waste Duty of Care Code of Practice](#)

[Environment Agency Key Actions for Farmers – Resource Efficiency and Waste](#)

[Plastic Packaging Tax \(Gov.UK\)](#)

If you are a LEAF member, visit the [LEAF Sustainable Farming Review \(LSFR\)](#) for further practices on plastic waste management and IFM.

## Simply Sustainable Series

Take a look at all of LEAF's Simply Sustainable Series of technical guidance booklets covering soil, water, biodiversity, biosecurity and Integrated Pest Management. Simple, practical advice and case studies to help farmers deliver more sustainable, regenerative farming through Integrated Farm Management. They are all free to download from our website: [www.leaf.eco](http://www.leaf.eco)





# About LEAF



Established in 1991, Linking Environment And Farming (LEAF) is a leading global organisation developing and promoting more climate positive, resilient and nature-based farming and food systems. LEAF works with farmers, food industry stakeholders, academics, retailers, and consumers to deliver productivity and prosperity among farmers, enrich the environment and engage society.

Our vision is a global farming and food system that delivers Climate Positive action, builds resilience and supports the health, diversity and enrichment of our food, farms, the environment and society.

Our mission is to inspire and enable more circular approaches to farming and food systems through integrated, regenerative and vibrant nature-based solutions, that deliver productivity and prosperity among farmers, enriches the environment and positively engages young people and wider society.

Find out more at [www.leaf.eco](http://www.leaf.eco)

## Integrated Farm Management

Underpinning LEAF's approach to delivering more sustainable farming is Integrated Farm Management (IFM). IFM is a site-specific, whole farm business approach that uses the best of modern technology and traditional methods. Attention to detail is key; appropriate and efficient use of inputs, smarter approaches to business planning and the adoption of innovations and new technologies, all contribute to increasing productivity whilst protecting valuable natural resources.





# The LEAF Network

The [LEAF Network](#) of Demonstration Farms and Innovation Centres supports the research, development, and promotion of IFM. LEAF Innovation Centres represent some of the UK's leading education and research establishments which focus on specific areas of IFM. This innovative research is fed back to LEAF Demonstration Farms, whose role is to show the beneficial practices of IFM to a broad range of audiences, through organised visits. This 'science into practice' approach is key to delivering IFM on the ground.

## The LEAF Sustainable Farming Review

The [LEAF Sustainable Farming Review](#) is a self-assessment, online management tool for LEAF members to help them farm more sustainably. It enables them to monitor their performance, identify strengths and weaknesses and set targets for improvement across the whole farm, covering the nine sections of IFM.

## LEAF Marque



LEAF Marque is a leading global assurance system recognising more sustainably farmed products. It stands for more environmental sustainability and is held by farm businesses which meet our rigorous standards of sustainable farming practice. LEAF Marque certified businesses have been independently verified against the robust LEAF Marque Standard, which is underpinned by the principles of IFM.

Find out more at [www.leaf.eco/farming/leaf-marque](http://www.leaf.eco/farming/leaf-marque)

## LEAF Education



LEAF Education works to engage, inspire and motivate young people through experiential learning, to equip future generations with balanced and informed insight into food production, farming and the environment. LEAF Education manages a number of industry and educational initiatives, including Farmer Time, Access to Farms, CEVAS (Countryside Educational Visits Accreditation Scheme), Countryside Classroom and Chef on the Farm.

Find out more at [www.leaf.eco/education](http://www.leaf.eco/education)



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