

Soils, Water and Wildlife



- **Championing the Farmed Environment is a partnership which supports farmers to deliver environmental benefits within a productive farm business.**
- We help and encourage farmers to improve their standards and practices
- We provide advice and guidance with training and information
- We work with other initiatives to support the industry in taking collective responsibility for achieving environmental benefit
- We promote and celebrate the work that farmers already do
- We recognise the importance of environmentally sustainable farming practices to future-proof the agricultural industry and produce high quality, sustainable food.
- We recognise the need for new agricultural and environmental policies which require farmers to deliver environmental goods alongside high value produce



Department
for Environment
Food & Rural Affairs



A Partnership

Helping farmers to
integrate environmental
management with
productive farming.





CFE

Championing the
Farmed Environment



Soils

Healthy soil is the basis for productive yields and biodiversity. The key to good soil husbandry is understanding the soil types on your farm.

The CFE logo consists of three overlapping diamonds: a brown one at the top, a blue one to the right, and a green one at the bottom.

CFE

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Water

Good management of riparian land and watercourses on your farm will help to protect your business and ensure the benefit of clean water filters through to other users.



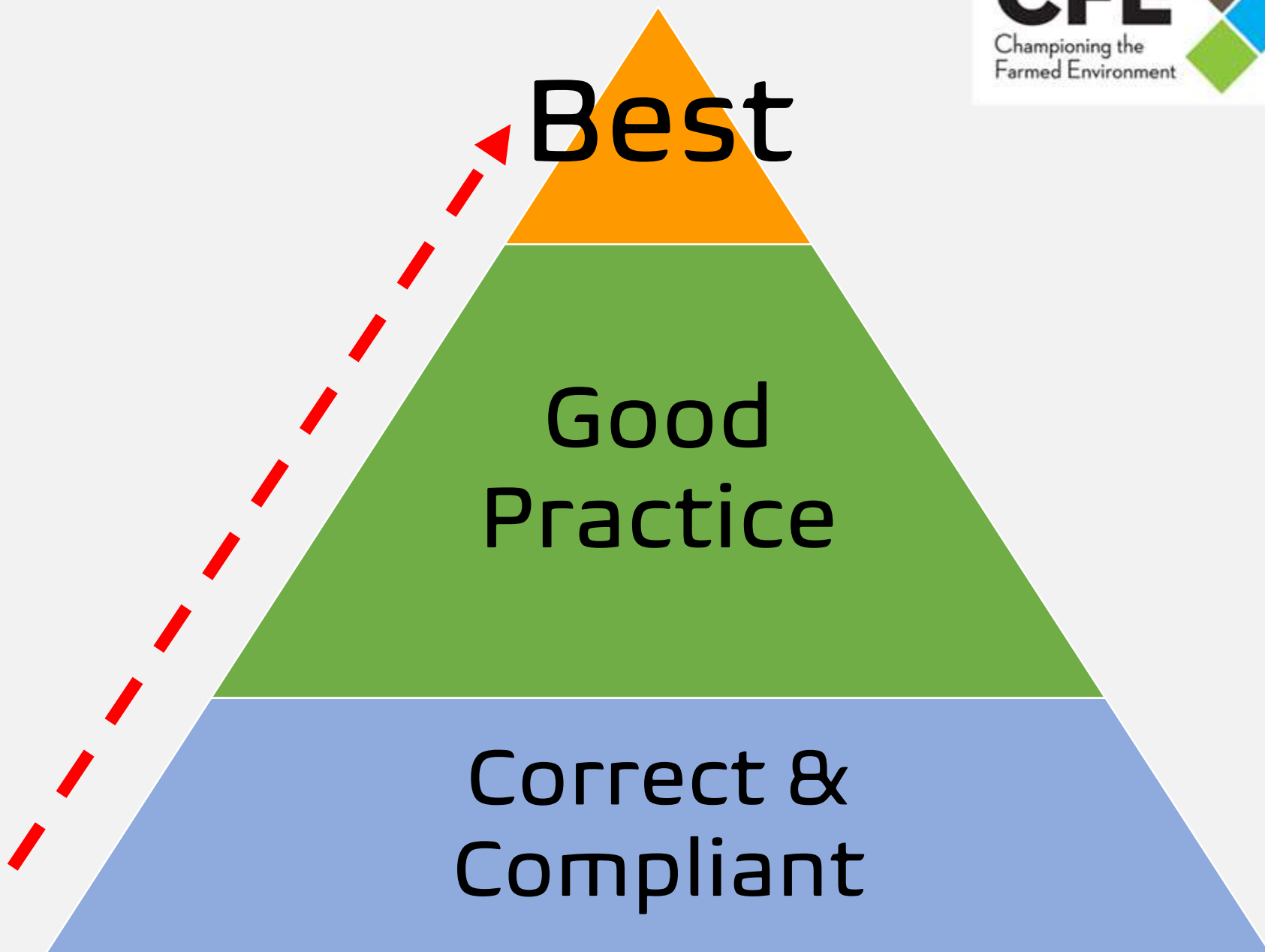
Air

Reducing emissions will have a beneficial impact on public health & wildlife habitats and will improve your efficiency.



Wildlife

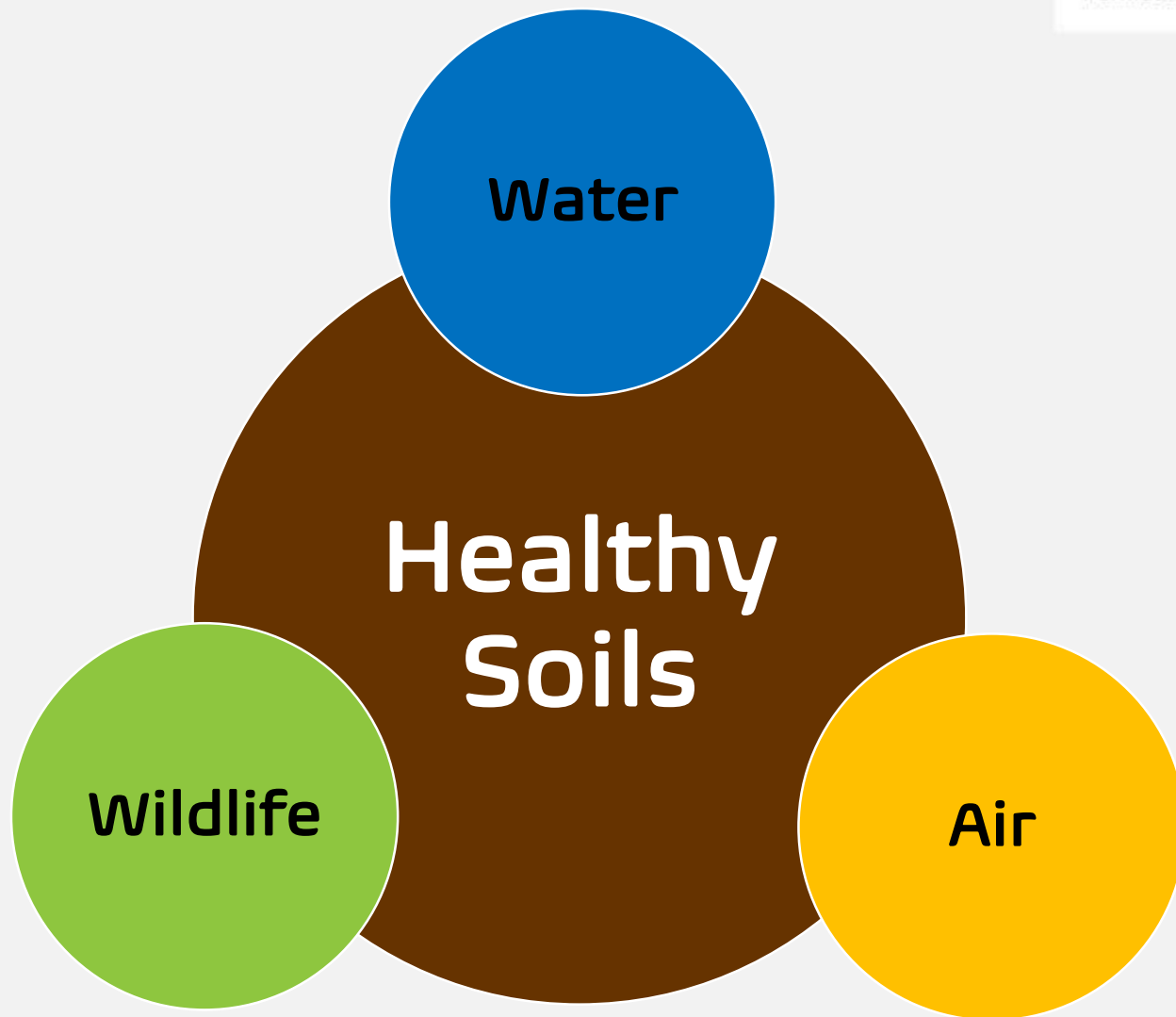
By managing areas of your farm for wildlife you will support healthy populations of pollinators, natural insect predators and other farmland flora and fauna.





Today's Talk

- To place the importance of soil management in a positive light for farm practice
- To highlight other benefits of best practice in soil management



Soils & Wildlife



- Abundant, diverse soil biology underpins the whole farm food web
- Healthy soils are critical to supporting more visible farm wildlife, like birds, mammals and wildflowers
- Healthy soil biology also supports healthy crops and livestock

The Farm Beneath Your Feet

- In a normal soil on an arable farm, there can be between 100,000 and 1 million earthworms, with a combined weight of between 100 and 1000kg, within one hectare.
- A diverse population of worms is necessary for organic matter breakdown into soils
- Worms improve the structure of soils for drainage and air
- They also make nutrients more available



Integrated Pest Management

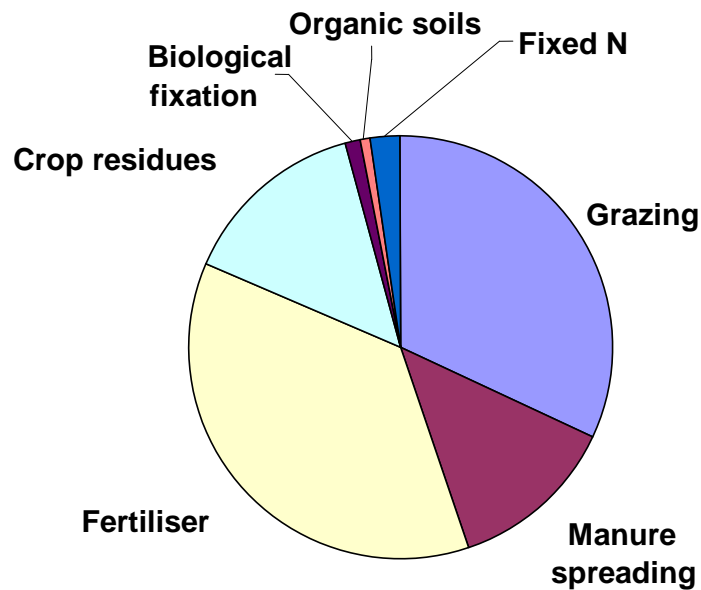
- IPM is an over-looked Cross Compliance requirement
- Using crop rotations & cultural controls & management approach to reduce reliance on chemicals and build resilience to pests, disease & resistance
- Healthy soil biology is key
- Crop rotations and soil fertility crucial





Ground & Rove Beetles

- Natural predators of agricultural pests
- Egg & larval stage live in the soil
- For a varied population of natural predators, we need healthy soil biology



Soils & GHGs

- 80% of UK NO_x emissions from agriculture
- Healthy soils which function well without fertilizer and drain well will help farmers reduce emissions

Crop Nutrition & Protection

- The soil is a heaving mass of life, from fungi to bacteria to nematodes and mites, centipedes, beetles and more
- These soil organisms interact with one another and the chemical and physical properties of the soil to drive soil processes.
- Crop roots form an association with fungi, sharing root exudates in return for nutrients
- Soil fauna break down organic matter and recycle nutrients, and protect plants from attack





Song Thrush

Relies on hedges and wet ditches

Feeds on worms, snails and invertebrates

They find it difficult to forage in hard compacted fields with few worms

Healthy soils with good worm populations will help birds like song thrush



Aquatic habitats

- Streams and rivers and estuaries affected by chemical-laden sediment inputs, such as neonics
- Leads to eutrophication, loss of open water, sedimentation of gravel beds and fish kills
- Vulnerable environments like maerl and seagrass beds are important for wildlife and climate change



Reduce-reuse-recycle!

- A healthy active soil will act as a recycler for farm manures and organic matter
- It will be a sink for carbon
- It will bear trafficking and livestock movements, and extend your farming window
- And these services will also benefit wildlife



Build your farm on solid ground!

- A healthy soil is the only sustainable foundation for a farm of the future
- Wildlife relies on it
- Healthy crops and livestock grow from it
- It helps us become resilient to climate change
- This is your most important long-term investment!

