

# REGENERATING OUR 1350 HECTARES

## JOHNNIE BALFOUR

*Johnnie farms at Balbirnie Home Farms in Fife, Scotland.*

*‘The land, and our business, was addicted to a cocktail of mismanagement. Something had to be done. Our answer to these threats has been the implementation of holistic management with the adoption of regenerative agricultural principles.’*

Balbirnie Home Farms is a large mixed farm in Fife, Scotland. We manage approximately 1350 hectares that ranges from heather hill ground at 250m to good quality arable ground at 50m. We grow cereal and vegetable crops as well as raising cattle and managing both native woodland and commercial plantation forestry.

Until 10 years ago we managed all of the land in what has often been described as a conventional management style: we ploughed all of the cultivated land; we had a short rotation of wheat, barley, oats and vegetables; we fed the cattle indoors on a barley-based mixed ration and sold them at 14-16 months as top quality beef; and we had plantations of spruce to sell for saw logs or wood chip.

Under this mainstream management system, we had seen the number of people working decrease over my lifetime, the number of hectares managed increase over the same time and the size of the tractors increase massively. Unfortunately, the farm was not profitable – and the race to the bottom was not producing good food, managing the environment or keeping as many people as possible living, working and thriving in the countryside. The land, and our business, was addicted to this cocktail of mismanagement.

Something had to be done. We had to address the haemorrhaging of cash, the loss of soil and the community becoming more urbanised and distant from its agricultural roots.

Our answer to these threats has been the implementation of holistic management with the adoption of regenerative agricultural principles.

The first key for us, to implement regenerative agricultural techniques, was to reduce both chemical and physical disturbance. While there is still work to be done, we have sold our plough, and we managed to grow our oat, barley and bean crops with no fungicides for the first time in 2021. While we have not eliminated mechanical or chemical disturbance from our farming, that is our target.

Keeping the soil covered reduces erosion and run-off and allowing life to flourish. We have sown crops in between our main crops to cover the soil over the winter and in 2020/2021 we only failed to sow anything in a handful of fields. We notice a reduction of run-off in bad winter weather.

Living roots in the soil help to keep nutrient exchanges working and allow life to flourish. At Balbirnie Home Farms we have permanent margins around most of our fields and are reinstating hedges. These permanent areas of the farm provide habitat for wildlife as well as predators of some of the pests that live in our crops. In addition we have under-sown crops into standing crops to reduce the time without living roots in our fields.

Biodiversity lies at the heart of regenerative agriculture. Diverse ecosystems are resilient particularly to fluctuations in temperature and moisture. By increasing the diversity not only around fields but also within them, we can make

our business more resilient to climate changes. Hedges, margins and agroforestry all provide diversity in our landscape. In addition, we sow polycultural crops rich in flowers and legumes to reinvigorate fields. We can pay for some of these by feeding them to livestock.

The glue that keeps all of these principles together is the integration of livestock. Livestock can convert plants into food for the soil. Livestock can harvest diverse polycultures that we are not able to harvest ourselves. Livestock can digest grasses and enhance our grassland ecosystems when managed in an environmentally sensitive way. The integration of a diverse range of livestock can enhance the ecosystem even further. In 2021 we used both cattle and sheep to manage our ecosystem. We expect to increase this in the future and farmers across the UK have options such as pigs, chickens, ducks, deer and many other species that can be used to help them.

By using human imagination and hard work, all of these principles can be brought to our landscapes and our local cultures can flourish. We are going to bring some allotments to our land along with educational programs in growing food in partnership with our local council. More people growing and eating more food grown in and around more villages will strengthen the cultural ties to the land and break down the walls between urban and rural life.

The principles of regenerative agriculture can heal a landscape and can build soil thereby becoming a critical element in developing our overall soil security. In addition, the food that is grown in soil that is diverse, rich and lively is in turn healthy, nutritious and tasty. By looking after our soils and the people that live, work and play on them we can lead happy, healthy and fruitful lives.