Regenerative Grazing

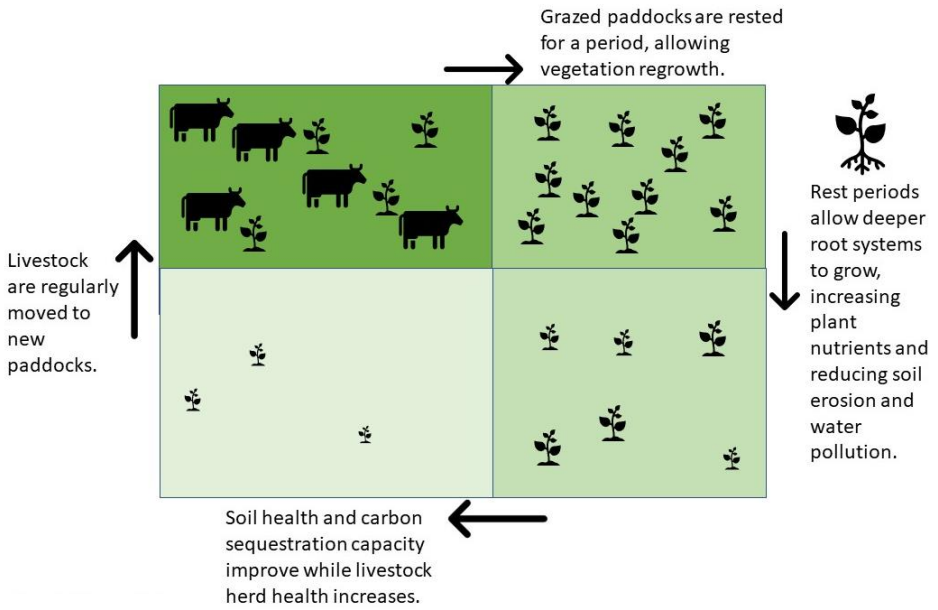
At Heligan we have started grazing our cattle and sheep differently, as we're trying a new method called Regenerative Grazing.

Traditionally, during the grass growing season animals are put in a field for a week or more when the grass has a small amount of fresh growth. They are moved to another field once it has all been eaten down, and the process is repeated. In a regenerative system, the animals are put in a smaller section of the field for a shorter amount of time (from a few hours to up to 3 days), and they are put in to graze when the grass is longer.

This system of grazing is part of a whole movement called Regenerative Agriculture, which seeks to work with nature and use natural processes rather than fight against them. Regenerative grazing tries to mimic the way animals behaved and grazed long ago, before they were domesticated by humans. Herds would graze together and be constantly moving, to find food and to keep themselves safe from predators such as wolves. As these predators no longer exist in the UK we can recreate this moving behaviour on a much smaller (& less dangerous!) scale using electric fencing. By moving the animals frequently the pasture has a longer time to recover and grow back. The plants have time to build up reserves, so they can be grazed again without weakening them.

Regenerative grazing mimics herds of large grazing animals moving across a landscape. Photo- Rewilding Britain

Our sheep and cattle graze together in a group called a 'Flerd', which comes from 'flock + herd'



Here at Heligan we are starting our regenerative grazing system with a flock of about 40 ewes and their lambs, and our 9 cattle with their calves, across an area of our farm about 40 acres in size.
We are also grazing a further 20 acres in a slightly different way, known as conservation grazing, with the main aim of providing space and habitat for wildlife.

<u>But that sounds like a lot of work?</u>

Luckily for us, there are lots of likeminded farmers trying regenerative grazing, and some have designed electric fences and water troughs that are designed to be moved quickly and regularly.
Our sheep and cows didn't take long to get used to being moved regularly, and now they eagerly move to the next section.

There are also additional benefits to moving the animals regularly- they are now not trying to graze near to their own dung, so they are less likely to be infected by flies and gut parasites.

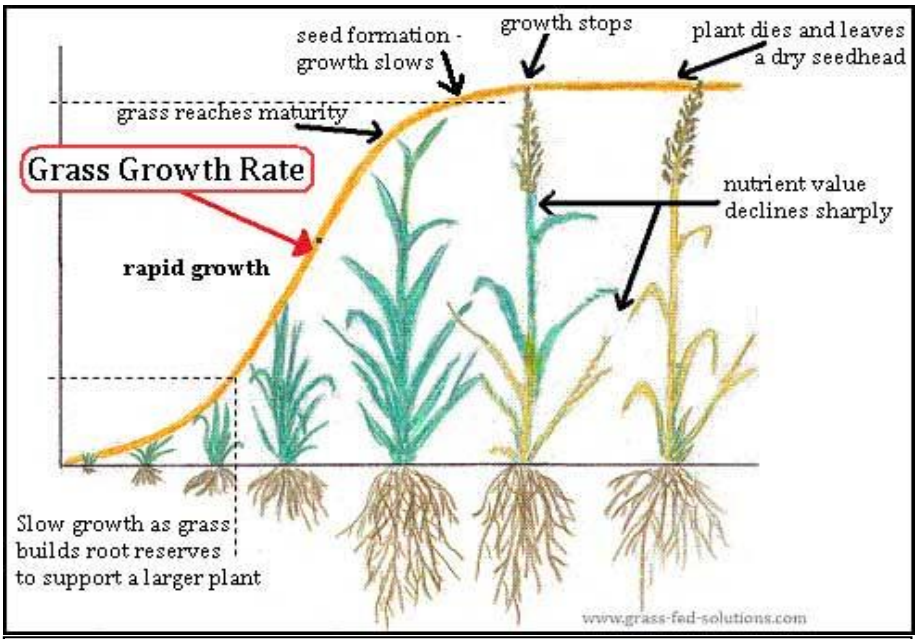
Building healthy soils, and capturing atmospheric carbon

Livestock aren't bad for the environment, it's the way they are kept that causes environmental damage. In other words **"It's not the Cow, it's the How"**
Bobby Gill, Savory Institute

The health of soil is one of the most important environmental challenges the world currently faces. We believe that we can increase the amount of carbon contained in the soil, and therefore build healthy soils, through the grazing of our livestock. The soil has the capacity to capture huge amounts of carbon from the air and actually reverse the effects of hundreds of years of fossil fuel emissions.

When a plant is grazed, it is effectively 'injured', and the shock triggers a stress response from the plant. It releases sugary sap (which contains carbon) out of its roots, which feeds and increases the growth of bacteria and fungi in the soil. This is known as a symbiotic relationship because the bacteria and fungi benefit from the food, and the plant benefits by accessing a supply of nutrients from the soil that it cannot take up without the bacteria and fungi.

Over time, this causes an increase in organic matter (which is carbon based) in the soil. In addition to this, by carefully grazing plants at a particular stage in their growth cycle, the rate of grass growth is increased, speeding up the whole process. Because of this, it is possible to capture carbon more quickly in pasture that is regeneratively grazed than in woodlands.



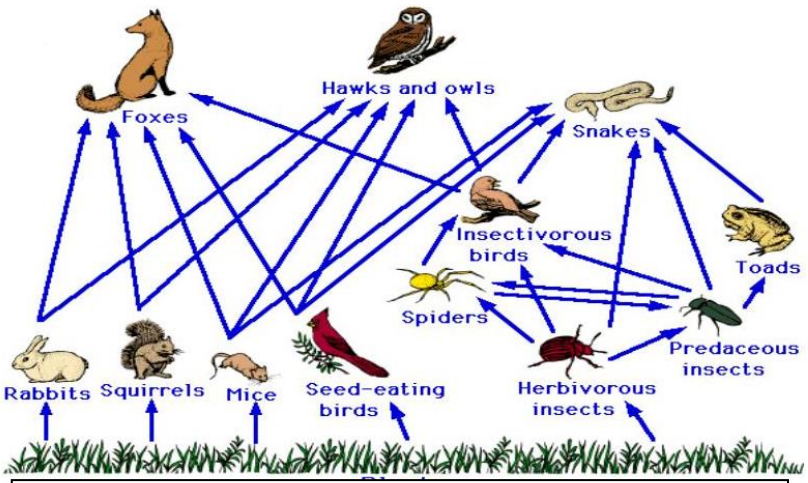
The life of a grass plant. Regenerative grazing aims to keep the grass at its maximum growth rate for as long as possible, by grazing just the tip of the plant. The plant recovers quickly with a strong root system and large 'solar panel' leaves.

Regenerative grazing meant that we fared better than some farmers during the drought last summer. We hope over time the soil will be able to store even more water and be resilient to a changing climate.

Healthy soil that is full of life can provide the pasture with all the nutrients it needs without using chemical fertilisers. The combination of plant cover on the soil, their long roots, and the proteins produced by soil fungi protect the ground from extreme weather such as heavy rain, and minimise soil erosion. The increased organic matter in the soil enables it to hold a large amount of water. This, combined with the long roots of the plants, mean that the pasture can also cope very well with drought periods.

Biodiversity and Wildlife

As well as grass, our fields contain a range of herbs and wild flowers, which create rich food webs that are beneficial to wildlife. The plants provide a wide variety of nectar sources for pollinators such as bees, butterflies and other insects. The insects then provide food for birds who are hunting to feed their chicks, in turn feeding large mammals such as foxes, and birds of prey.



An example of a pasture food web

Having a wide range of plants available to eat also benefits our livestock. A traditional farm might focus on a few species, such as perennial ryegrass, that grow quickly when chemical fertilisers are used, but a more diverse diet provides a greater variety of nutrition. Diverse pastures can also benefit the environment, as plants that contain fumaric acid (such as bird's foot trefoil, angelica, shepherd's purse and common fumitory) have been shown to reduce the amount of methane produced by grazing animals by up to 70%.

Diverse pastures can also provide extra health benefits for our animals- some plants that contain tannins (including chicory and bird's foot trefoil) can disrupt the biology of gut parasites, so the cattle and sheep are less affected by them. The farm team then needs to use less medication to treat these gut parasites, which results in even more benefits for wildlife. Dung beetles and many other invertebrates cannot survive in the dung of medicated animals, so using less medication means more dung beetles, and more of the animals that feed on them such as horseshoe bats and birds.

Can regenerative grazing help feed the world?

With careful management, regeneratively grazed pasture can be very productive, and some farmers have found an increase in their grass output of up to 50% compared to previous management. This could mean farmers are able to increase the number of animals they keep on the same amount of land.

Livestock are able to thrive year-round by eating just this high-quality pasture, without the need to buy external (often highly processed) feeds. This is possible for beef, lamb and dairy production. There is also no need to purchase chemical fertilisers or pesticides, which saves money for the farmer.

Regeneratively farmed meat and dairy tastes good and is good quality too; it has been shown to be higher in Omega-3 fatty acids, vitamins and minerals, and lower in saturated fat compared to animals who are fed grain.