

Wildflowers: A business case for engagement, environment and economics

Highlighting the potential opportunities and benefits of wildflower seed production in Cornwall and the Isles of Scilly





Image © Alasdair Moore, 2022. The Lost Gardens of Heligan Wildflower Project; a stunning 15 acre annual meadow providing a unique visitor attraction and generating £18K worth of seed.

“ Cornwall’s biggest industry is tourism... let’s make Cornwall the most beautiful, wildflower laden, glorious place to visit in the country! ”

**Alasdair Moore, Head of Gardens and Estate,
The Lost Gardens of Heligan.**

The Business Case - why wildflowers?

What is this report and who should read it?

Drawing on the [Heligan Wildflower Project case study](#), this resource outlines a wider business case for the potential opportunities and benefits of local wildflower seed production. It will be of interest to any landowner, land manager, environmental practitioner or policymaker interested in how the production of local wildflower seed can boost local businesses, enhance biodiversity and increase the health and wellbeing of residents and visitors to Cornwall and the Isles of Scilly, and beyond.

The opportunity

There is a significant and growing demand for locally sourced wildflower seed in the South West of England. This is seen across farming, business, conservation and local government sectors. For example, local and parish councils are creating wildlife-friendly greenspaces, farmers and landowners are planting wildflower meadows and margins and re-wilding estates, and innovative businesses are developing new products from wildflower seed to diversify their income.

This demand is only likely to increase following the Government's 2020 Green Recovery Plan, incentivising the protection and restoration of nature (e.g. new agri-environment schemes ¹) to benefit business, the environment and people's health and wellbeing.

The majority of wildflower seed used for these activities to date has been harvested either from a limited number of donor sites, or bought from national commercial seed companies. Therefore, an exciting opportunity is emerging for businesses to pioneer novel locally produced wildflower seed products and services. These have the potential to boost and diversify income, whilst at the same time enhancing the natural environment, and bringing together both local communities and visitors for enhanced health and wellbeing.

Decline in wildflowers and pollinators

There is currently high demand for wildflower seed, especially for species-rich meadow seed mixes. However, having lost 97% of lowland meadows since WWII², this valuable resource is now in short supply. Pollinators that pollinate wildflowers and crops are also under threat, with one third of wild bee and hoverfly species in decline in the UK³.

“ Everything we do at Cabilla has to be ecologically, economically and spiritually sustainable. Planting wildflower seeds for pollinators and for guests to walk through ticks all three of those boxes. ”

**Merlin Hanbury-Tenison,
Founder,
Cabilla Cornwall**

Engagement

For every £1 spent on projects enhancing nature, between £6.88 - £8.50 is returned in health and wellbeing⁴ benefits. Wildflowers offer novel community and visitor engagement opportunities.

People

Economics

Customers will pay more for environmentally locally produced products. Wildflowers offer new opportunities through selling of the seed, creating new products and services and attracting visitors.

Profit

Planet

Environment

The pollinating work of wild bees is worth over £2.4K per hectare of crop⁵. Protecting, and creating new flower-rich habitats is key to ensuring our valuable pollinators thrive. Wildflowers provide nectar and pollen for pollinators, support biodiversity, capture carbon and enhance natural capital.



Wildflowers

Case Study – The Heligan Wildflower Project

The Lost Gardens of Heligan ⁶

This is a 200 acre garden and estate in Cornwall, South West of England. The Heligan Wildflower Project was designed and managed by Alasdair Moore (Head of Gardens and Estate at Heligan), working closely with Richard Scott from the National Wildflower Centre⁷. See the full [Heligan Wildflower Project case study](#) for more details.

The Heligan Wildflower Project benefits

Since 2019, a large 15-acre meadow has been successfully established with cornfield annuals on the Lost Gardens of Heligan site. This delivers multiple benefits including an unforgettable visitor experience, plentiful food for pollinators and additional business income. This project provides an excellent case study of business enhancement through the growing of wildflowers.

The costs

The initial 87kg of seed mix, including Poppy (*Papaver rhoeas*) (seed treated), Cornflower (*Centaurea cyanus*), Corn marigold (*Glebionis segetum*), Corn chamomile (*Anthemis arvensis*) and Corn cockle (*Agrostemma githago*) was bought from the National Wildflower Centre, based at the Eden Project in Cornwall. This consisted predominantly of poppy seeds in reference to the First World War commemorations at Heligan over the previous four years.



The poppy seed was costly (£7,000), as it had been treated to increase its germination. Labour and machinery hire for preparing the ground, sowing, harvesting and cleaning the seed cost £2200, and design and printing of seed packets for retail cost £1,154. Other wildflower planting projects could significantly reduce this initial outlay cost by either reducing, excluding, or replacing this with a lower cost seed (i.e. seed mix excluding poppy cost £2,830).

The returns

In the first year (2019), 153kg of seed was available for wholesale and retail once the harvested seed was cleaned and separated by Emorsgate⁸ (the leading national wildflower seed company). Bulk wholesale price was between £60/kg and £100/kg, which meant that Heligan had between £9,180 and £15,300 worth of seed at wholesale value.

However, Heligan was also interested in the opportunity to retail its seeds via wildflower seed packets in its shop. Seeds grown on-site offer a highly marketable product providing a higher retail revenue of £389.56/kg (in Heligan's case sold singularly in 7g packets, with a multi-buy discount).

Thus, Heligan adopted a model of part wholesale (83% of the seed being sold back to the National Wildflower Centre) and part retail (17% of the seed selling in the Heligan shop). This model shows an approximate **gross income of £17,749 in the first year** and, after costs, a net income of £11,565 - representing a 187% return on investment.

Table 1 shows this, along with a predicted forecast based on this model over five years, using the lowest wholesale price of £60/kg and excluding poppy seed. On this basis, a 389% return on investment is predicted by year five.

Alastair's vision:

- Draw in visitors and revenue.
- Communicate with the public about flowers and pollinators.
- Produce saleable crop products e.g. wildflower seed.
- Act as a test-case / exemplar for the potential of local wildflower seed production.

Table 1

The estimated five-year forecast for a 15-acre site based on the Lost Gardens of Heligan's Wildflower Project results from year 1.

Year	Year 1	Year 2	Year 3*	Year 4	Year 5
Costs:	£6,184	£3,421	£4,078	£3,559	£3,631
Seed	£2,830		£589		
Labour	£2,200	£2,244	£2,289	£2,335	£2,381
Seed packets	£1,154	£1,177	£1,201	£1,225	£1,249
Gross Income:	£17,749	£17,749	£17,749	£17,749	£17,749
Wholesale **	£7,620	£7,620	£7,620	£7,620	£7,620
Retail	£10,129	£10,129	£10,129	£10,129	£10,129
Total net income:	£11,565	£14,327	£13,670	£14,189	£14,118

* an optional 20% over-seed in year 3 ** using the lowest wholesale price of £60/kg

Other potential returns on investment

- ✓ **Increased visitor numbers and repeat visits** - our 2021 visitor survey data confirmed that 79% would visit again to experience the meadow, and 90% would recommend visiting the meadow to someone else.
- ✓ **Enhanced biodiversity and pollinator numbers** - wildflower meadows deliver numerous valuable ecosystem services such as carbon sequestration and pollination. The latter, provided by wild pollinators attracted to wildflower meadows, could be worth over £2.4k per hectare of crop⁵.
- ✓ **Health and wellbeing benefits** - there are various [economic and non-economic measures and tools](#) for evaluating the health and wellbeing benefits of nature based health interventions used to assess the value of this ecosystem service, one of which suggests returns of between £6.88 - £8.50, for every £1 spent. In Heligan's case, this could mean that with an initial investment of £6,184, health and wellbeing returns could be between £42,546 - £52,564, but only if nature-based activities, such as social prescribing, were run in conjunction with the wildflower site.

“ In all my thirty years of horticulture, the Heligan Wildflower Project is unquestionably my favourite project. Regardless of age group or background, everyone was moved by what they saw ”

Alasdair Moore, Head of Gardens and Estate, The Lost Gardens of Heligan

2022 Update from Heligan

A similar yield and return were expected in the years following 2019. However, 2020 brought the Covid-19 pandemic and with it, unforeseen challenges, one of which was a very restricted cash flow. As a result, Heligan departed from their year 1 model, agreeing instead, to give their wholesale seed to the National Wildflower Centre in exchange for their ground preparation and harvesting services. Heligan also paid for on-site seed cleaning by [South West Seeds](#) (£500). In year 2, therefore, Heligan's only income stream was from their retail seed sales – a reduced, but non-the-less, vital source of much-needed cash.

In 2021, there was an unusually dry spring which resulted in a much less diverse display of wildflowers. Consequently, Heligan decided not to harvest their seed, instead taking the opportunity to revise their plans and develop a perennial and annual wildflower seed project for 2022.

It is important to note, therefore, that Table 1 outlines the potential business opportunity for wildflower seed production based on Heligan's year 1 model (and results) being replicated in subsequent years. The factors above explain why this has not been possible at Heligan, and therefore the model does not reflect the actual year 2 and year 3 returns of the Heligan Wildflower Project.

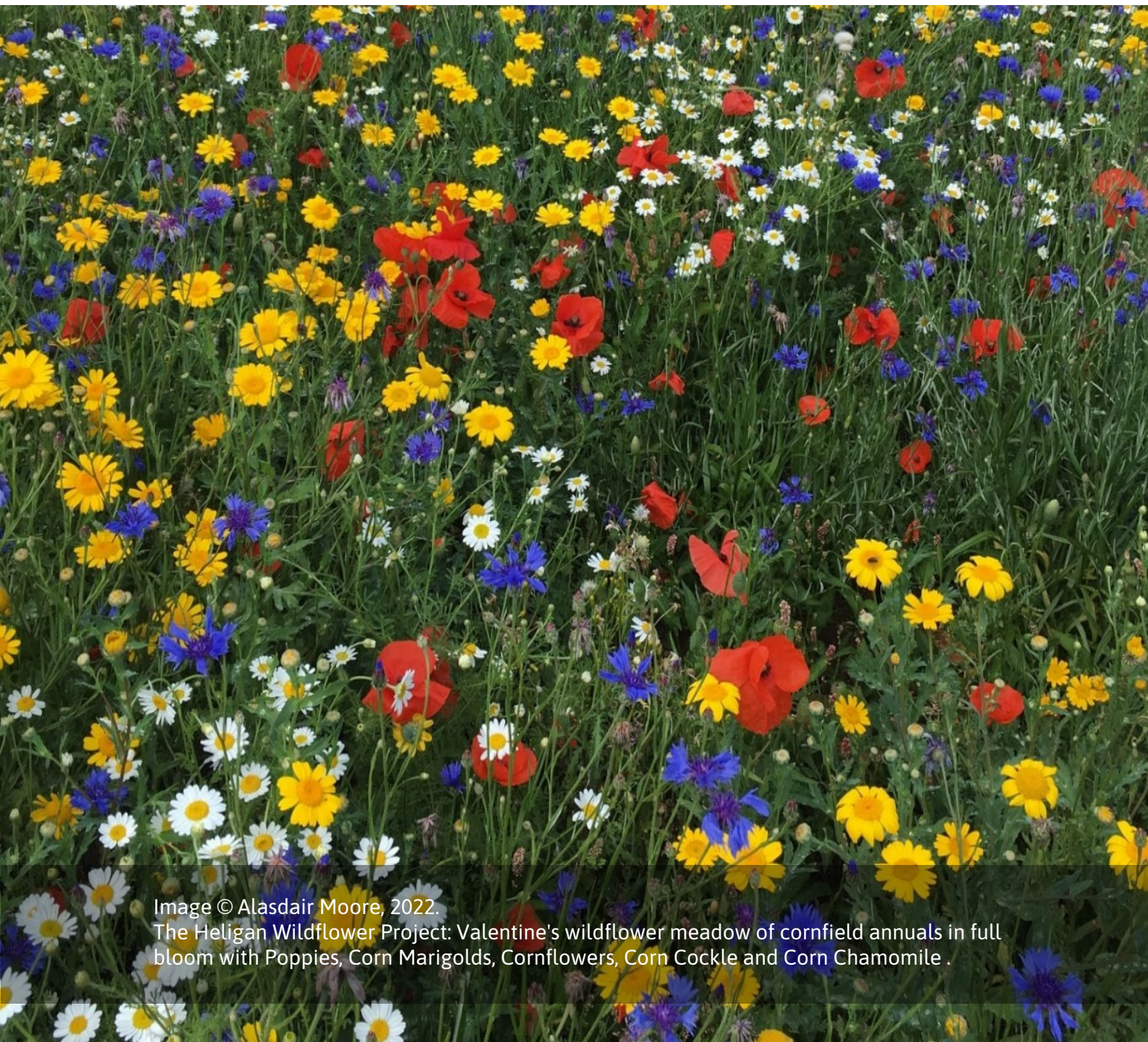


Image © Alasdair Moore, 2022.

The Heligan Wildflower Project: Valentine's wildflower meadow of cornfield annuals in full bloom with Poppies, Corn Marigolds, Cornflowers, Corn Cockle and Corn Chamomile .

Wildflowers for your business

The Heligan Wildflower Project has provided a valuable learning experience for the team at the Lost Gardens of Heligan. It is also beginning to inspire other landowners looking to plant wildflowers and adopt similar wholesale and retail business models to realise the opportunities for economic, social and environmental returns.

The lessons learnt from this project will be invaluable to others embarking on similar ventures, for example, ensuring sufficient time and investment to establish product differentiation, brand development and marketing to

highlight the unique local “Cornish” and “Isles of Scilly” elements. Additionally, this project highlights the importance of setting up a successful retail market and collating and communicating the evidence about the positive local community and environmental benefits of growing wildflower meadows. This investment and work could be undertaken in collaboration with other interested businesses, such as the Lost Gardens of Heligan, to ensure cost-efficiencies.

There is also growing demand for wildflower seed sourced from local provenance perennials (plants that live for several years) for habitat regeneration, longer-term carbon storage and natural capital enhancement projects.

This offers a further opportunity for landowners, conservation organisations, and volunteers to work together to locate, protect, and enhance local perennial wildflower seed sources and ensure the seed is sustainably and effectively collected, sown, and harvested. As we’ve seen, the Lost Gardens of Heligan already plan to create perennial wildflower displays in the future.



The benefits

Examples of potential wildflower products and services:

- Wholesale seed for land regeneration and nature recovery, e.g. agri-environment scheme options.
- Wholesale seed for community greenspace development and green infrastructure.
- Retail for households, community projects and schools.
- Nutraceutical oils from calendula, borage and sunflower seeds (in collaboration with [Trelonk](#)).
- Wildflower turf or seed balls.
- Natural dye from wildflower petals/roots.
- Specialist conservation mixes and wild birdseed.

Planting wildflower meadows offers a range of unique business opportunities that also benefit the environment and people and include:

Business diversification and resilience - the creation of new products and services (see above) and high-quality grass-fed beef, lamb and dairy products from livestock grazing on perennial wildflower meadows.

Cost savings - wildflower areas provide ground cover that reduces weeds and disease (requiring fewer chemicals), increase protein and minerals in forage for livestock (resulting in healthier livestock) and, where wildflower areas include legume species such as clovers, fix nitrogen from the air (providing free fertiliser).

Supporting biodiversity - wildflowers provide food and habitats for pollinators and other beneficial insects.

Action against climate change - regeneration of land to create wildflower meadows improves soil structure, reduces water run-off and flooding, and sequesters carbon – all of which reduces our carbon footprint⁹

Health and wellbeing - wildflower meadows offer local communities and visitors an opportunity to engage and connect with nature, thus enhancing physical and mental health. Good health and high wellbeing is associated with spending at least 2 hours a week in nature¹⁰, and the psychological benefits increase with increased biodiversity of green spaces¹¹. For more research and resources on the link between nature and health and wellbeing, visit the [SWEEP Investing in Nature for Health Hub](#) and project webpage.



Conclusion

This business case study illustrates how wildflowers can form part of a sustainable business model that aims to boost and diversify income (contributing to the local economy of Cornwall and the Isles of Scilly), whilst at the same time enhancing biodiversity, and people's engagement with, and benefit from, nature. We advise that businesses looking to take inspiration from this business case study and interested in exploring the opportunity further should seek independent advice from their financial advisor and agronomist.

Wildflowers could form a sustainable part of your business plan if..

- Used as part of a broader business model around enhancing the natural environment and visitor experience.
- Based on a blended model of seed for retail and wholesale.
- Due consideration is given to the impact of unforeseen circumstances affecting yield and/or cash flow.
- There is considerable investment in developing the brand and product differentiation.
- The business aims to benefit from economies of scale by partnering with other businesses to share land, expertise, personnel, machinery, equipment and a branding and marketing strategy.
- The business explores opportunities and partnerships to create new products from the seed.
- There is a collaboration between wildflower businesses and conservation/wellbeing organisations.
- Seed collection and production are conducted in a way that enhances the natural environment.
- The business initially focuses on annual species before exploring opportunities for perennial seed.

For those with land, investing in seed, labour, harvesting and branding and marketing for wildflower products could have the potential to return £11-£14K pa whilst also providing benefits for people, the planet and profit.

References

- ¹ [The Environmental Land Management scheme: an overview - GOV.UK \(www.gov.uk\)](https://www.gov.uk)
- ² Fuller (1987), *Biological Conservation*, 40, 4.
- ³ Powney *et al.* (2019), *Nature Communications*, 10, 1.
- ⁴ [SROI Report FINAL - DIGITAL.pdf \(wildlifetrusts.org\)](#)
- ⁵ Kleijn *et al.*, (2015), *Nature Communications*, 6, 7414. This is a US study but provides a proxy for the ecosystem service of pollination from wild pollinators. This paper combines USA and European results on the contribution of wild pollinators to a range of crops. \$3,251 per ha converted to £2,480 per ha using the exchange rate at time of writing.
- ⁶ [The Lost Gardens of Heligan](#)
- ⁷ [National Wildflower Centre at the Eden Project, Cornwall](#)
- ⁸ [Emorsgate Seeds \(wildseed.co.uk\)](#)
- ⁹ [Carbon storage by habitat- NERR043 \(naturalengland.org.uk\)](#)
- ¹⁰ White *et al.* (2019), *Scientific reports*, 9, 7730
- ¹¹ Fuller *et al.* (2015), *Biology Letters*, 3, 4

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The South West partnership for Environmental and Economic Prosperity ([SWEEP](#)) helps deliver economic and community benefits whilst also protecting and enhancing the area's natural resources.



sweep

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SWEEP is a partnership between the University of Exeter, the University of Plymouth and Plymouth Marine Laboratory. Funded by NERC, it brings together experts and stakeholders to solve key challenges faced by those working with our natural resources.