

- **Enhance production:** having lots of earthworms and microbes in your soil improves soil structure, which leads to naturally higher yields

1. Van Groenigen, J. W., Lubbers, I. M., Vos, H. M., Brown, G. G., De Deyn, G. B., & Van Groenigen, K. J. (2014). Earthworms increase plant production: a meta-analysis. *Scientific reports*, 4(1), 1-7.
2. Neal, A. L., Bacq-Labreuil, A., Zhang, X., Clark, I. M., Coleman, K., Mooney, S. J., ... & Crawford, J. W. (2020). Soil as an extended composite phenotype of the microbial metagenome. *Scientific reports*, 10(1), 1-16.
3. Blouin, M., Hodson, M. E., Delgado, E. A., Baker, G., Brussaard, L., Butt, K. R., ... & Brun, J. J. (2013). A review of earthworm impact on soil function and ecosystem services. *European Journal of Soil Science*, 64(2), 161-182.

- **Reduce costs:** natural nitrogen fixers, such as clovers in grassland and beans or peas in a tillage rotation, can reduce the need for applying costly fertilisers.

1. Reinprecht, Y., Schram, L., Marsolais, F., Smith, T. H., Hill, B., & Pauls, K. P. (2020). Effects of nitrogen application on nitrogen fixation in common bean production. *Frontiers in plant science*, 11, 1172.
2. Ledgard, S., Schils, R., Eriksen, J., & Luo, J. (2009). Environmental impacts of grazed clover/grass pastures. *Irish journal of Agricultural and food research*, 209-226.

- **Reduce pest outbreaks:** diverse crop rotations, native wildflower strips for predatory insects, and dense hedgerows for birds can help naturally control insect populations and reduce pest outbreaks.

1. Labeyrie, V., Renard, D., Aumeeruddy-Thomas, Y., Benyei, P., Caillon, S., Calvet-Mir, L., ... & Reyes-García, V. (2021). The role of crop diversity in climate change adaptation: Insights from local observations to inform decision making in agriculture. *Current Opinion in Environmental Sustainability*, 51, 15-23.
2. Dainese, M., Montecchiari, S., Sitzia, T., Sigura, M., & Marini, L. (2017). High cover of hedgerows in the landscape supports multiple ecosystem services in Mediterranean cereal fields. *Journal of Applied Ecology*, 54(2), 380-388.
3. Albrecht, M., Kleijn, D., Williams, N. M., Tschumi, M., Blaauw, B. R., Bommarco, R., ... & Sutter, L. (2020). The effectiveness of flower strips and hedgerows on pest control, pollination services and crop yield: a quantitative synthesis. *Ecology letters*, 23(10), 1488-1498.

- **Improve animal welfare:** healthy hedgerows can decrease the risk of airborne diseases and provide shelter and shade for livestock – increasingly important as summer droughts and winter storms increase in intensity.

1. Now generally accepted - e.g. Teagasc (hedgerows): [Value of Hedgerows - Teagasc | Agriculture and Food Development Authority](#)

- **Increase climate resilience:** well-managed watercourses can improve water quality and reduce the potential for flood damage, while multi-species swards and diverse cropping can help reduce the impacts of drought on grass and crop yields.

1. Riley, W. D., Potter, E. C., Biggs, J., Collins, A. L., Jarvie, H. P., Jones, J. I., ... & Siriwardena, G. M. (2018). Small Water Bodies in Great Britain and Ireland: Ecosystem function, human-generated degradation, and options for restorative action. *Science of the Total Environment*, 645, 1598-1616.
2. Renard, D., & Tilman, D. (2019). National food production stabilized by crop diversity. *Nature*, 571(7764), 257-260.

- **Open potential income streams:** agri-environment schemes are increasingly rewarding farmers who deliver more for nature and the climate.  
e.g. CAP23, ELMs..

- **Provide a better working environment:** A farm full of biodiversity can increase the wellbeing of the farm family and their surrounding community.

1. Kindermann, G., Domegan, C., Britton, E., Carlin, C., Isazad Mashinchi, M., & Ojo, A. (2021). Understanding the dynamics of green and blue spaces for health and wellbeing outcomes in Ireland: A systemic stakeholder perspective. *Sustainability*, 13(17), 9553.
2. Batterham, P. J., Brown, K., Trias, A., Poyser, C., Kazan, D., & Calear, A. L. (2022). Systematic review of quantitative studies assessing the relationship between environment and mental health in rural areas. *Australian Journal of Rural Health*.
3. Houlden, V., Jani, A., & Hong, A. (2021). Is biodiversity of greenspace important for human health and wellbeing? A bibliometric analysis and systematic literature review. *Urban Forestry & Urban Greening*, 66, 127385.
4. Batterham, P. J., Brown, K., Calear, A. L., Lindenmayer, D., Hingee, K., & Poyser, C. (2022). The FarmWell study: examining relationships between farm environment, financial status and the mental health and wellbeing of farmers. *Psychiatry Research Communications*, 2(2), 100036.