PROJECT NOTE OCTOBER 2022

Biodiversity and Resilience Interventions

Analysis of Interviews with Farmers in Germany

Adina Kuncz, Fatima Lambarraa-Lehnhardt, Peter Zander, and Wei Zhang

This note summarizes the results of interviews with 18 farmers in Germany to identify the motivations and challenges that impact farmers' adoption of practices that improve biodiversity.[1] All interviews were conducted either by phone or on Zoom. Respondents were identified through contacts provided by Bayer AG, the Leibniz Centre for Agricultural Landscape Research (ZALF) networks, local farmers associations, an online list of apprenticing farms, and the farmer network of the team leader based at ZALF, and thus were not representative. The interviews were part of the Enhancing Biodiversity and Resilience in Crop Production project, which was commissioned by Bayer and implemented in collaboration with ETH Zurich and IFPRI. The project analyzed information that can contribute to guidance on using agricultural practices to improve biodiversity and resilience of farming systems. It focused on intensive maize, wheat, and soy production systems in France, Germany, Brazil, and the United States.

Findings

Our team interviewed farmers in Germany and found that farmers have experience with biodiversity enhancing practices and recognize some of their benefits. However, farmers feel that their ability to adopt additional biodiversity measures is limited by costs and strict regulations. In the interviews, farmers discussed their experiences with biodiversity enhancing practices, perceived benefits of biodiversity, perspectives of neighboring farmers, regional support for biodiversity, policies and programs, and hopes for the future of their farms.

Biodiversity Knowledge & Experience

1. **Species diversity and value of nature:** Over half of the farmers we interviewed described biodiversity as a variety of plant, animal, and insect species. A few farmers also referenced a respect for nature in their description of biodiversity.

2. **Recognition of benefits:** Several farmers stated that biodiversity generates a greater presence of beneficial insects and pollinators. Some farmers also highlighted other benefits of biodiversity, such

[1] For additional details about the project note, please refer to the full project report or contact: Fatima Lambarraa-Lehnhardt, Fatima.lehnhardt@zalf.de; Peter Zander, peter.zander@zalf.de; Wei Zhang, w.zhang@cgiar.org

as cost savings achieved through reduced chemical input use, improved soil fertility, reduced soil erosion, decreased pollution, and increased wildlife existence.

3. **Established experience:** All the farmers we interviewed currently use practices on their farms that improve biodiversity. Crop diversity, crop rotation, and mandatory soil testing is practiced by all farmers. A majority of farmers also have flower strips to support pollinators and natural enemies of pests and have reduced their application of chemical inputs. Most farmers also have permanent grassland and several make efforts to decrease their energy use. Many farmers described these practices as beneficial to their farms and effective in supporting biodiversity.

Adoption Influences

1. **Financial support and practicality:** Financial impact was the consideration most frequently discussed by farmers when they shared their motivations for adopting biodiversity enhancing practices. Many farmers said their adoption decisions are driven by cost-benefit assessments. Other farmers said they are motivated by financial incentives.

2. **Range of motivators:** Farmers also shared various other sources of motivation that encourage them to adopt practices. Some farmers said they select biodiversity enhancing practices to help with pest and disease control or to improve soil health. Other farmers said that their decisions are based on whether they have the authority to use the practice, impacts on crop yield, or the amount of work that is required.

Adoption Limitations

1. **Impact on finances:** Farmers most commonly cited financial feasibility as the greatest obstacle to implementing additional biodiversity enhancing practices. Farmers are concerned that introducing new biodiversity practices will reduce their crop yields and consequently decrease their earnings, result in a low return on investment, require the purchase of expensive seeds, and necessitate higher operating costs.

2. **Lack of market reinforcements:** Farmers also feel limited by the existing market and believe that it is unsupportive of those who practice biodiversity measures. Several farmers said they cannot compete with other countries in selling certain crops, there is an absence of market cooperatives, and they are unable to sell some crops due to a lack of demand.

3. **Restrictive regulations:** Many farmers noted that they are limited by policies and programs that support biodiversity measures. Farmers said that these initiatives are restrictive, have difficult requirements, and do not offer subsidies and incentives that adequately cover expenses.

Neighboring Farmers & Regional Support

1. **Mixed perspectives on biodiversity:** Farmers were asked whether neighboring farmers hold views of biodiversity that are comparable to their own and their responses varied. Several farmers said that their neighbors share similar views, while other farmers said their views differ. Many other farmers said that their neighbors have an assortment of views; some individuals share similar views and others do not. A few farmers said that the views of their neighbors are shaped by their farm size or shift with generational changes in management.

2. **Interest in biodiversity measures and adoption willingness:** Some farmers said that their neighbors seem open to adopting biodiversity enhancing practices but face limitations in doing so. A couple of farmers said that their neighbors are interested in learning about biodiversity enhancing practices but lack information or want to know the outcomes of the practices before introducing them on their farms.

3. **Concentration on financial gains:** Farmers said that regional support for biodiversity can be increased by focusing on financial benefits. A few farmers suggested offering financial incentives for adopting biodiversity measures, while another farmer said attention should concentrate on the profitability of practices.

4. **Adjust existing regulations:** Several farmers said that regional support for biodiversity can be increased by altering laws and initiatives to better meet farmers' needs. Some farmers said that more scientific research is needed to inform the design of effective laws or suggested making regulations more flexible. Other farmers said that regional differences and needs must be recognized to support the development of laws that are suitable for the location where they are implemented.

Experience with Policies & Programs

1. **Demonstrated engagement:** A majority of interviewed farmers said they participate in or have prior experience with initiatives that support biodiversity such as regulations, laws, support programs, government subsidies, and company policies. Farmers have experience with crop protection technology, water protection programs, the Hessian Agri-environmental and Landscape Management Measures,[2] and organic farming subsidies.

2. **Finances influence participation:** Most farmers said that financial considerations are the most important factor for their participation in policies and program. These include costs, feasibility, and available incentives.

3. **Prioritize proven benefits and cost-benefits:** Some farmers also said that it is important for them to know that initiatives result in positive outcomes before they choose to participate. Other farmers said that they decide to participate in a program by weighing the requirements and the level of effort against the benefits they would gain.

4. **Challenged by high costs of seeds:** Many farmers said that expensive seeds are the most significant cost of participating in biodiversity enhancing programs.

5. **Strict requirements:** Nearly all farmers stated that they believe policy and program requirements are too strict. Further, the most frequently mentioned change that farmers would like to see in current initiatives is less restrictive regulations. Some farmers said that requirements and regulations are not always beneficial for their farms, while others said they desire more freedom in their decision-making.

---

[2] The Hessian Agri-environmental and Landscape Management Measures (or die Hessischen Agrarumwelt- und Landschaftspflege-Maßnahmen) refer to agri-environmental measures in the state of Hessen in Germany. For more information: https://llh.hessen.de/unternehmen/agrar-politik-und-foerderung/halm/

Aspirations & Measures of Success

1. **Increase flower strips:** Most farmers said that if cost were not an issue, they would like to plant more flower strips on their farms. Several farmers shared that the flower strips that are currently on their farms are incredibly beneficial, and they would like to plant more if they are able to.

2. **Success determined through finances:** A majority of farmers said that they would view their farms as successful in the future if their financial outcomes improve.

3. **Better market opportunities contribute to success**: Over half of interviewed farmers said that they believe their farms would be successful in the future if they are able to focus on direct marketing or if market conditions improve.

4. **Success regarded as personal contentment:** Several farmers said that they view future success as achieving happiness and improving their well-being. Some farmers expressed that this also applies to their employees and families.

Conclusion

Farmers demonstrate an understanding of biodiversity and are aware of some of the ways biodiversity enhancing practices can be used to improve their farms. Farmers' views are particularly favorable toward biodiversity enhancing practices that they've had positive experiences with and that have exhibited direct benefits to their farms. Many farmers expressed a willingness to continue these practices and a desire to expand them. Farmers' decisions to use biodiversity enhancing practices or participate in policies and programs is largely influenced by financial factors, such as financial incentives available, cost-benefit, profitability, and costs. Several farmers highlighted that seeds are expensive and difficult for them to purchase, and also that they would like to know that practices result in positive outcomes before adopting them. Farmers feel that regulations and requirements are too strict and they desire increased flexibility. Several farmers also feel that the existing market is not supportive of those who practice biodiversity measures. Farmers believe that they will achieve success in the future if they experience financial gains, improved market conditions, or happiness.

ABOUT THE AUTHORS

Adina Kuncz was a research intern at the International Food Policy Research Institute (IFPRI), Washington, DC, and graduate student at Duke University at the time this study was written; Fatima Lambarraa-Lehnhardt is a senior researcher at the Leibniz Centre for Agricultural Landscape Research (ZALF); Peter Zander is a senior researcher at ZALF; and Wei Zhang is a senior research fellow at IFPRI, Washington, DC.

ACKNOWLEDGMENTS

The authors acknowledge the financial support for this project from Bayer. This work was produced as part of the Enhancing Biodiversity and Resilience in Crop Production project led by the International Food Policy Research Institute (IFPRI) in partnership with ETH Zurich. The full project report is available here. We are grateful to all the farmers who have shared their time with us during the interviews to make this project possible.

Funding for this work was provided by Bayer and was produced in collaboration with ETH Zurich and IFPRI. This publication has been prepared as an output of the Enhancing Biodiversity and Resilience in Crop Production project and has not been independently peer reviewed. Any opinions expressed here belong to the authors and are not necessarily representative of or endorsed by IFPRI.

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

A world free of hunger and malnutrition

IFPRI is a CGIAR Research Center

1201 Eye Street, NW, Washington, DC 20005 USA | T. +1-202-862-5600 | F. +1-202-862-5606 | Email: ifpri@cgiar.org | www.ifpri.org | www.ifpri.info