



Inspired by Science

EXECUTIVE SUMMARY OF IMPACT ASSESSMENT REPORT PROJECT SAHYOG

Implementing Partner: Roots Foundation



SoulAce
Path to Sustainability

SOULACE CONSULTING PVT. LTD.

CHAPTER 1

INTRODUCTION

BACKGROUND AND NEED OF THE PROGRAM

Project Sahyog, implemented by the Roots Foundation, is driven by the pressing need to tackle numerous challenges faced by farmers in the regions of Haryana & Punjab. These challenges include labor shortages, improper use of agrochemicals, and limited access to advanced farming equipment. Recognizing these obstacles, Project Sahyog aims to transform agricultural practices through a comprehensive approach that integrates training, awareness, and the deployment of state-of-the-art spraying machines. From July 2022 to February 2023, a six-month project was initiated in Haryana and Punjab. The primary goal of both projects was to encourage the safe and efficient adoption of boom sprayers.

The introduction of advanced spraying machines like boom sprayers not only improves the efficacy of crop protection but also reduces labor dependency, leading to significant cost savings for farmers. This transition from conventional to modern farming methods enhances productivity and also ensures sustainable agricultural practices.

Moreover, Project Sahyog endeavours to bridge the gap between traditional farming methods and modern, efficient practices. By empowering farmers with the necessary skills and tools, the project aims to enhance crop yields, optimise resource utilisation, and foster economic growth in the agricultural sector. Ultimately, the initiative aims to improve the overall livelihood of farmers in these regions, promoting resilience against challenges such as climate variability and economic uncertainty.

OBJECTIVES OF THE PROGRAM



To enhance the environmental sustainability of farming practices.



To improve the economic conditions of farmers through knowledge transfer and entrepreneurship development.



To reduce the dependency on labour for spraying by making efficient spraying equipment available.



To advocate for the proper application of agrochemicals to reduce health hazards and environmental damage.



To provide training that results in behavioural changes among farmers regarding agrochemical usage.

ABOUT PI FOUNDATION

PI Industries, founded in 1947, is a top Indian agrisciences company. The company specialises in the development, manufacturing and distribution of pesticides, herbicides, fungicides, and specialty chemicals. The company operates extensively in India and has a global market in Asia, North America, and Europe. The company ensures the delivery of advanced agricultural solutions that enhance crop productivity and protection.

PI Foundation Trust, a Charitable Trust formed by PI Industries Ltd, was established in 2012. The Foundation focuses on supporting farmers, promoting sustainable farming practices, and enhancing the overall quality of life in rural communities.

ABOUT ROOT FOUNDATION

The Roots Foundation, established in 2012, is a non-profit organisation headquartered in New Delhi. The organisation is recognised for its holistic approach to development, integrating sustainable agriculture, community empowerment, environmental conservation, and social inclusion. It implements projects focused on improving agricultural productivity through the introduction of modern farming techniques, sustainable land management practices and efficient irrigation systems. The organisation is committed to creating long-term impact, promoting resilience and improving the quality of life in the regions it serves.

CHAPTER 2

RESEARCH METHODOLOGY

PI Foundation commissioned SoulAce to assess the impact of its CSR initiative. A descriptive study was conducted to evaluate the level of satisfaction among farmers regarding the project team's support and the economic benefits of the boom sprayer on crop yield and crop management.



Discussion with the Beneficiary during Home Visit

MIXED METHODS APPROACH

This study utilised a mixed-methods approach, incorporating both qualitative and quantitative research methods. The qualitative component delved into subjective experiences and perspectives, providing a nuanced understanding of beneficiary views. Meanwhile, quantitative methods facilitated the collection and analysis of numerical data, yielding statistical insights and identifying trends. The study's research design was descriptive, aiming to present a detailed situational analysis and exploration of Project Sahyog's agrochemical technology. Descriptive research is apt for creating an overview, discerning patterns, and grasping the current state of affairs. By integrating both qualitative and quantitative research methodologies within a descriptive framework, the study aimed to deliver a thorough evaluation of the program, elucidating its impact, and suggesting avenues for enhancement. This methodological blend ensured a holistic examination of the subject, lending both depth and breadth to the findings and bolstering the study's credibility.

ENSURING TRIANGULATION

To enhance the reliability and validity of its findings, the study implemented various triangulation techniques. Data triangulation was achieved by gathering information from diverse sources, including survey methods and key stakeholder interviews among the farmers. This extensive data collection facilitated a comprehensive evaluation of the program's impact.

Methodological triangulation was also employed, utilising a variety of research methods such as surveys and interviews. This approach allowed for cross-verification of information and helped mitigate potential biases. Through these triangulation strategies, the study ensured a robust and dependable analysis, reinforcing the trustworthiness of its findings.

RESEARCH DESIGN



Research Design Used

Descriptive research design



Sampling Technique

Purposive Random Sampling



Sample Size

23



Qualitative Methods Used

Key Informant Interview and Testimonials

OBJECTIVES OF THE STUDY

The primary objectives of the study were to:



To evaluate the changes in farming practices and income post-intervention.



To assess the effectiveness of training sessions on the use of agrochemicals.



To measure the economic benefits associated with the boom sprayer on crop yield and production.



To evaluate the level of satisfaction among farmers regarding the project team's support and the quality of the boom sprayer.



To identify the challenges faced by the farmers and ascertain the extent to which the project addressed those challenges.

KEY STAKEHOLDERS



Farmers



Implementing Agency

STUDY TOOLS

Primary data was collected using the following:



Structured tool of Interview Schedules:

Questionnaires were prepared for capturing quantitative data, the project details for each of the focus areas were reviewed, and indicators were pre-defined before conducting the surveys.



Interview Schedules for Key Stakeholders:

A semi-structured questionnaire was developed for key stakeholders. One-on-one discussions were conducted with beneficiaries to prepare case studies.

ENSURING COMMITMENT TO RESEARCH ETHICS

ANONYMITY: Anonymity refers to not revealing the identity of the respondents. This research study strictly sticks to not revealing the identity of respondents unless the same is warranted for the illustration of success stories or case studies.

CONFIDENTIALITY: After the research was completed, the study did not reveal which individual respondents answered which question in what manner. The results were revealed only as an aggregate, so no one would be able to single out the identity of a particular respondent. This was required to not break the trust of the respondent by not revealing the individual identity. Research subjects participate in the process only based on the trust that confidentiality is maintained. Hence, the research would not reveal any data regarding the respondents for purposes other than the research study.

NON-MALEFICENCE: Research would not lead to harm to the research subjects. This study ensured that the respondents were not harmed in any way.

JUSTICE: Justice refers to being fair to all. This research study ensures equal treatment of all its research subjects and no biases or prejudices towards any group based on social stereotypes or stigma associated with being a member of a certain group or class.

03. SUMMARY

PROJECT BACKGROUND

Project Sahyog is a collaborative initiative between PI Industries and Roots Foundation, aimed at enhancing environmental sustainability and economic benefits for farmers. The project seeks to bridge the gap between traditional farming methods and modern, efficient practices by leveraging agrochemicals for crop production. From July 2022 to February 2023, a six-month project was launched in Haryana and Punjab. The objective of the project was to promote the safe and efficient adoption of advanced spraying technology.

Boom sprayers were utilised to demonstrate safe and efficient spraying techniques. These state-of-the-art machines are designed to cover large areas uniformly, ensuring precise application of agrochemicals. Boom sprayers are equipped with multiple nozzles mounted on a horizontal bar (the boom), which allows for consistent and even distribution of chemicals over crops.

The project provided hands-on training to farmers on operating these machines, emphasising their benefits in improving crop yield, reducing labour dependency, and promoting sustainable agricultural practices.

This report details the implementation efforts of the project and presents findings from a study conducted to validate its outcomes. The study indicates that the introduction of boom sprayers generated significant revenue for farmers. They gained extensive knowledge about the proper and safe usage of agrochemicals. These impacts collectively contributed to the project's overarching goal of enhancing agricultural practices, ensuring sustainability, and improving the livelihoods of farmers.

PROJECT ACTIVITIES



Training and Awareness Programs

- Conducted training sessions for farmers on the safe and proper use of agrochemicals.
- Organised awareness campaigns to educate farmers about the benefits of using advanced spraying equipment.



Entrepreneurship Development

- Supported farmers to develop entrepreneurial skills by leasing out equipment.
- Encouraged income generation through the rental of spraying machines.



Equipment Distribution

- Provided boom sprayers and other spraying equipment to farmers.
- Demonstrated the use of these machines and encouraged farmers to lease them out.



Advocacy

- Promoted best practices for agrochemical application to minimise environmental impact.
- Educated farmers on the safe disposal of chemical containers and crop protection methods.

PROJECT DETAILS



Implementation year

FY 2022-23



Assessment year

FY 2024-25



Implementing Partner

Roots Foundation



Beneficiaries

90 Farmers as direct and 6700 beneficiaries as indirect



Project location

Haryana & Punjab



SDG Goals



DESIGN SNAPSHOT



Project Name

Project Sahyog



Research Design

Descriptive research design



Sampling Methodology

Purposive Random Sampling



Sample Size

23



**BOOM SPRAYER TO BE
FIT WITH TRACTOR**

Key Outcomes



Delivered 90 Boom Sprayers across 286 villages covering more than 6131 acres of farmland.



Conducted 4 training sessions across 286 villages.



Organized 2 demonstrations and 90 field visits, facilitating practical learning and adoption of new practices.



More than 500 farmers trained.



Benefited approximately 6700 farmers, including Self-Help Groups (SHGs), women, and children, through enhanced agricultural practices and increased awareness.



Implemented efficient spraying practices, resulting in a 20% reduction in agrochemical usage in project locations.



Generated increased revenue of over INR 18,39,300 for the 44 entrepreneurial farmers who rented boom sprayers.



Entrepreneur farmers generated significant income through renting boom sprayers, with an average income of INR 42,000 per season per crop.



Engaged farmers in multiple sensitization drives to promote best practices in agrochemical usage.



Mega farmer meets organized for equipment distribution in Hisar and Ludhiana.

Key Impacts



Increased awareness of efficient agrochemical usage.



Implemented efficient spraying practices, leading to increased productivity.



Boosted revenue generation and reduced labour costs for farmers through the use of modern agricultural technologies.



Enhanced awareness and adoption of best practices among farmers, benefiting entire communities, including women, children, and Self-Help Groups (SHGs).



Promoted sustainable agricultural practices, contributing to environmental stewardship and long-term agricultural resilience.

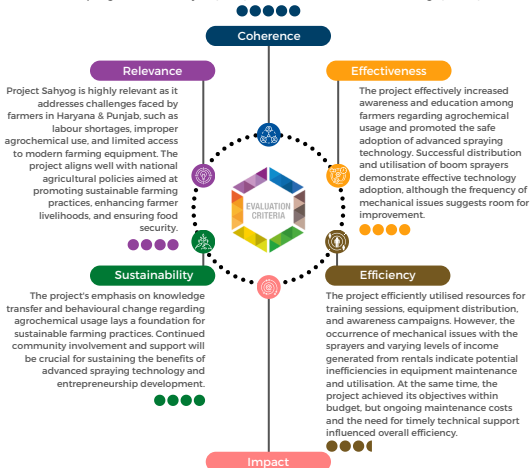
04. OECD FRAMEWORK

The project aligns with several Sustainable Development Goals (SDGs):



Additionally, the project complements national initiatives such as:

National Food Security Mission (NFSM), National Mission for Sustainable Agriculture (NMSA), Paramparagat Krishi Vikas Yojana (PKVY), National Action Plan on Climate Change (NAPCC)



Relevance



Coherence



Effectiveness



Efficiency



Impact



Sustainability