

ZBNF Project Activities



Zero Budget Natural Farming in Andhra Pradesh, India

Zero Budget Natural Farming (ZBNF) is a grassroots agrarian movement in Andhra Pradesh (AP), India. It is a low-cost, locally-sourced natural farming method that does not rely on the use of agrochemicals and has the potential to meet the twin goals of global food security and conservation of the environment. An interdisciplinary team of soil and social scientists from the University of Reading and Rythu Sahikara Samstha (RySS) are working to develop an evidence base to understand the strengths and weaknesses of the ZBNF approach, to what extent that success has come from context-specific conditions, and whether there are principles that could be useful in other geographic and cultural areas

DEVELOPING AN EVIDENCE BASE TO SUPPORT ZBNF'S WIDER APPLICATION

PARTICIPATORY PHOTOGRAPHY

To analyse farmer decision making and innovations resulting from ZBNF adoption. The research developed an innovative methodology using photography with the women in Self-Help Groups in the 3 locations to reveal their perspectives and rationales for adopting full or partial ZBNF, and analyse processes of communication and innovation. These data were collected from 6 villages with the support of 3 researchers from RySS to generate a large data set of photo responses taken by the women farmers themselves and annotated with their associated narratives.



MAPPING OF GENDERED INNOVATION SYSTEMS

Aims to understand the knowledge exchange processes. The data collection for this task was completed in 2019 and analysis shows distinct innovation systems and process of knowledge exchange across locations. A paper is in preparation capturing the key findings, keep an eye on our news page for further developments.

UNDERSTANDING UPTAKE OF ZBNF INNOVATION - 365 GREEN COVER

Focusing on the low rainfall district of Anantapur, we are surveying farmers who have adopted '365 green cover' (live mulching/ green cover for 365 days of the year) as part of their ZBNF practise. The survey aims to establish the General household profile (Demography, Land and location, Livelihoods) and farming system (Cropping, Level of Adoption of 365 innovation, Food security /dietary diversity) of ZBNF farmers in Anantapur.

ENVIRONMENTAL EVALUATION OF THE ZBNF SYSTEM

The aim is to provide scientific evidence underpinning the environmental benefits of the ZBNF system under five broad themes for research include: nutrient budgeting; carbon dynamics; resilience to climatic stress; soil microbial ecology; quantifying water use. Experiments have been run for 3 seasons, in 6 agri-climatic zones of Andhra Pradesh evaluating the performance of ZBNF contrasted with conventional chemical input and organic amendment systems. Day to day management is undertaken by the RySS Natural Farming Fellows (NFFs) with oversight from the Research Coordinators (RCs), RySS, and UoR team. Initial results indicate that there is no yield penalty associated with the first year of conversion the ZBNF system. This is a positive outcome -because ZBNF requires less financial input and has beneficial environmental impacts.



ASSESSING THE INFLUENCE OF INDIVIDUAL COMPONENTS OF THE ZBNF SYSTEM

Examining the effects of different ZBNF inputs (Bijamrita, Solid Jiwamrita, Liquid Jiwamrita, and Achhadana) on crop yield and the relationship between soil physical, chemical and biological parameters. These experiments are managed by the RySS Research Coordinators (RCs) in consultation with RySS and the UoR team. Analysis of the first seasons data indicates that crop performance is improved if all components are used but no clear mechanism for what is driving this has emerged as yet.