

# **FROM WASTE TO WEALTH: A STORY OF SKILL DEVELOPMENT IN COMPOST MAKING AND GREEN FARMING**

## **The Land of Tradition**

In the state of Meghalaya, farming is more than a livelihood-it's a way of life. For generations, the people of this region have practiced traditional farming, working in harmony with the land and its natural resources. Agriculture is the backbone of the state's economy, with 81% of the population depending on it for their income and sustenance. The fields, forests, and rivers are not just resources but a part of their identity. But as the world modernized, so did farming practices. The Green Revolution brought chemical fertilizers and pesticides, promising higher yields and greater profits. While these methods initially seemed like a boon, they came at a cost. The soil grew weary, the environment suffered, and the farmers found themselves trapped in a cycle of dependency on expensive chemical inputs. The harmony between the land and its people began to fray.

## **A Crisis and a Catalyst**

Recognizing the harmful effects of chemical inputs on health and the environment, the Government of Meghalaya, in the year 2015 had withdrew all subsidies on fertilizers and pesticides. While this move was a step toward sustainability, it left the farming communities in a precarious position. Without affordable alternatives, many struggled to maintain their yields and livelihoods. It was in this moment of uncertainty that the Bio-Resources Development Centre (BRDC) stepped forward. With a vision to revive the state's agricultural heritage, BRDC introduced Sustainable Green farming practices-a set of affordable, eco-friendly practices designed to empower farmers. The mission was clear: to equip communities with the knowledge and skills to produce their own inputs, improve soil health, and enhance crop productivity while protecting the environment.

## **The Green Revolution Reimagined**

BRDC's approach was rooted in community empowerment. They began by training Master Farmers-local leaders who would act as ambassadors of Sustainable green farming practices. These Master Farmers, armed with knowledge and passion, conducted workshops and hands-on demonstrations across rural communities.

The training focused on a range of preparation of Farm inputs that are environmentally friendly:

1. **Composting:** Farmers learned to transform biomass, animal waste, and other organic materials into nutrient-rich compost using methods like Vermicompost, NADEP, and Hot Berkeley compost.
2. **Vermi-wash:** A liquid fertilizer and pest repellent made from vermicompost and cow urine.
3. **Organic Growth Promoter:** A natural fertilizer to boost the growth of young plants that utilises vegetable wastes and jaggery fermented for 30 days.
4. **Biopesticides:** Pest control solutions made from botanical extracts (local insecticidal and pesticidal plant resources), combined with low cost bait traps and light traps.
5. **Vertical Farming:** A low cost space-saving technique to maximize vegetable yields from small plots.
6. **Energy Pillars Technology:** A method to rejuvenate aging citrus trees.
7. **Biofertilizer Application:** Enhancing soil microbial activity for healthier crops.

Field trials were conducted to validate the effectiveness of these sustainable green farming practices. Crops like French beans and rice showed significant increases in yield, proving that green farming practices could not only match but surpass conventional methods.

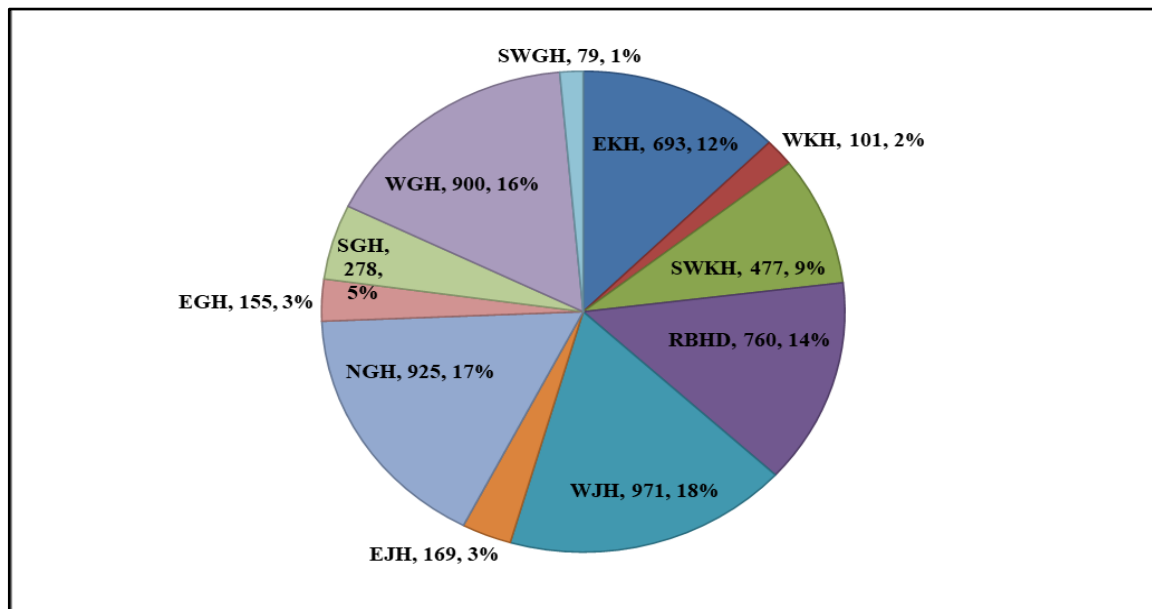


**Various Sustainable green technologies promoted to farmers and their efficacies on various crops.**

## The Harvest of Hope

The impact of BRDC's initiative was profound. Over 5,508 farmers, including Master Farmers, were trained in Sustainable Green Technologies. Communities that once struggled with the high costs of chemical inputs now had access to affordable, homegrown solutions. The cost of farming decreased, while crop productivity and income levels rose.

But the benefits extended beyond economics. The farmers noticed improvements in soil health and biodiversity. Indigenous crops, once pushed to the margins, began to thrive again. The fields of Meghalaya were no longer just a source of food but a symbol of resilience and sustainability.



**Districtwise number of Master Trainers/Master Farmers trained**

## The Lessons Learned

As the farmers embraced these green technologies, they uncovered valuable lessons that has shaped the future of sustainable agricultural practices.

1. Sustainable Agriculture is Possible: They learned that farming didn't have to come at the expense of the environment. By using compost and bio-inputs, they could improve soil health, increase biodiversity, and grow healthier crops—all while protecting the land for future generations.

2. **Cost-Effective Solutions:** Producing their own compost and bio-inputs reduced the cost of production.. No longer burdened by the high cost of chemical fertilizers, the farmers could invest in their families and communities.
3. **Environmental Stewardship:** Composting organic waste reduced pollution and greenhouse gas emissions. The farmers realized they weren't just growing food—they were healing the planet.
4. **Higher Yields, Better Lives:** The proof was in the fields. Crops grown with compost and bio-inputs were more productive and of higher quality. This meant more food on the table and more income from the market.
5. **Empowerment Through Knowledge:** Perhaps the most profound lesson was the power of self-reliance. The farmers no longer depended on external inputs or advice. They had the skills and confidence to take control of their farming practices and their futures.



**HandsonDemonstrationoncompostingandother sustainablegreenpracticestoheruralcommunities**

## **Challenges Along the Way**

The journey was not without its hurdles. Despite the success, some challenges persisted:

1. **Limited Adoption of Sustainable Green farming practices:** Some farmers were slow to adopt the new practices, often due to a the intensive manual labour involved in preparation of inputs, reluctance to disuse chemical fertilisers and their reliance and expectancy on Government support for their agricultural cultivation. Overcoming these barriers required continuous outreach and education.
2. **Gender Disparity in Training Participation:** While women showed great enthusiasm for the training programs, men were less likely to participate. Addressing this imbalance was crucial to ensure that everyone in the community could benefit equally from the initiative.