CLOSING INCOME GAPS
Mars Wrigley and Tanager International Shubh Mint Project: How partnerships and project design helped raise incomes of Indian mint farmers
1 October 2019

The Living Income Community of Practice

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Today’s webinar facilitators

Stephanie Daniels
Sustainable Food Lab

Sheila Senathirajah
ISEAL Alliance
The Living Income Community of Practice

Foster collaboration and support organisations in their journey towards improving farmer incomes, and enabling farmers to achieve a decent standard of living.

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The Living Income Community of Practice

Fostering collaboration and support organisations in their journey towards improving farmer incomes, enabling farmers to achieve a decent standard of living.

Facilitate learning and exchange around measurement

Understand the gap between actual and living income

Identify and discuss strategies to close the income gap

Learning across sectors and helping organisations realise SDG commitments

Open community of practice
Sharing information about the efforts of different actors in this space

Learn more: www.living-income.com
Contact: livingincome@isealalliance.org
Today’s guest speakers
The Shubh Mint Project: How partnerships and project design helped raise incomes of Indian mint farmers

Jeremy Schifeling

Joseph Boulier

MARS WRIGLEY
In Uttar Pradesh, India, mint farming is a cash crop for families.

**Mint**
- Uttar Pradesh is the largest producer of mint in the world
- Grown by more than 1 million smallholder mint farmers
- Mint oil and natural menthol are used in gums, confections, oral care and pharmaceuticals

**The Challenge:**
Small farms, declining yields and low farmer incomes

**Our Shared Goals:**
By 2021, in Barabanki and Lucknow, we aim to have:

- **20,000** farmers adopting mint good agricultural practices
- **Double incomes** from mint
- **30% lower** water usage
Shubh Mint Impact for Farmers

- 250% Increase in net income from mint
- 24% Reduction in cost of production
- 40% Reduction in water usage
The world we want tomorrow starts with how we do business today.

MARS
Sustainable in a Generation Plan
MARS
It’s time to embrace a sense of urgency.

- Since we set our initial sustainability ambitions and targets, we’ve gotten smarter about the very human issues the world faces.
- The science is better. The data is stronger. We now know we must be bolder.
- We must look beyond what’s in our direct control – to affect change in our entire value chain.
The world is facing significant challenges like poverty, food insecurity and climate change. Businesses like ours have a significant role to play in tackling these challenges and shaping a positive, sustainable future. Our actions are guided by our Five Principles and informed by science. Mars is proud to do its part as we pursue growth we are proud of.

We will reduce our environmental impacts in line with what science says is necessary to keep the planet healthy.

We will direct our innovation pipeline and market our products in ways that help billions of people and their pets lead healthier, happier lives.

We will significantly improve the working lives of 1 million people in our extended supply chains to enable them to thrive.
We can’t do it alone...

- Healthy Planet
- Thriving People
- Nourishing Wellbeing

Board Support  Passionate Mars Associates  Government & NGO Partners  Suppliers & Customers  Consumers
Tanager: Growth For Good

Tanager, established in 1993 as an ACDI/VOCA affiliate, is an international non-profit with a global mission to help solve problems of poverty, food security, nutrition and gender inequity. We connect people and partners in markets around the world to co-create opportunities for life-changing, sustainable change.

Our Expertise

• Sustainable sourcing
• Nutrition and gender integrated agriculture
• New ideas and technologies
• Access to secure financial services
• Workforce development
• Market Readiness

For more details: visit www.tanagerintl.org
Contact: JBoulier@tanagerintl.org
Tanager: India Presence

Logos: Mars Wrigley, Callisons, Walmart Foundation, UNDP, IFAD, Symrise
Philosophy of Co-creation

We align interests of producers, financial institutions, input suppliers, exporters, traders, processors, service providers, and end consumers to achieve common goals.
Partners
Mint in India

Context

- 70% of the world’s mint oil production
- 92% of India’s mint oil comes from small and marginal farmers (less than two acres)
- Short growing season
- Planted from stolons, transplanted from seedlings
- Block farming system
- Local distillation
- MCX Exchange commodity
Mentha arvensis Value Chain Map

Perfumery Industries

Flavor and confectionary

Pharmaceuticals

Small scale Exporters

Large scale Exporters

District Level Aggregators

Large Traders

Village Aggregators

Processors

Smallholder Farmers

Medium & Large Scale Farmers

MCX warehouses

Input suppliers

Large scale Exporters

Large Traders

MCX warehouses

Large scale Exporters

Large Traders

Input suppliers
Shubh Mint Project Timeline

Phase I: Assessments, Analysis, and Trials

Phase II: Implementation and Research

Phase III: Coalition Building and Scale
Phase I: Research

- Mint Value Chain
- Mint Investment Workshop
- Living Income Benchmark
- Mint Compendium
- Mint Crop Research Trials
- Stolon Multiplication Trials
- Gender Analysis
- Barrier Analysis
- Institution & Resource Mapping
Mint Value Chain Analysis

Background

- Verify current assumptions
- Understand the challenges
- Understanding stakeholder behavior within the supply chain
- Understand levers to pull
Mint Value Chain Analysis

Methodology

- Completed in 2 districts of Uttar Pradesh, 300 farmers, 50 processors, 20 aggregators, 10 commission agents, 5 traders and 2 exporters
- Participatory Rural Appraisals
- Semi-structured interviews, questionnaires and focus groups
Mint Value Chain Analysis

Key Findings

• 25-35% decrease in yields over the previous decade due to poor quality planting material, lack of GAP

• Adulteration happens throughout the supply chain

• Increasing cost of production

• Extremely price volatile
Living Income Benchmark & Farm Economic Model

Background

• Estimate a living income for the mint growers in Uttar Pradesh

• Farm economic model

• Conducted in collaboration with Sustainable Food Lab providing technical support
Methodology

- 80 mint farming households across two districts Sitapur and Barabanki of Uttar Pradesh

- Participatory rural appraisals

- Household interviews, weekly dietary diaries, focus group discussions, rapid market assessments, data tabulation and synthesis

- Estimated Cost of Living

- Inputs from value chain and analysis for income and cultivation costs
Living Income Benchmark & Farm Economic Model

Key Findings

• A mint growing household needs $1.53 (USD) per person per day and farmers are achieving .67 cents per person per day

• A mint growing household is receiving 1,715 per year of which $531 is from farm income from three crop seasons, $800 other cash income from farming, and $384 of off farm income

• Mint is 39% of available cash income

• Farmers were not aware of ways to reduce farming costs and enhance productivity
Research Trials

Background

- Developed mint compendium capturing best practices and costs
- Based on previous assessments, understand how the GAP performs against control farms
- Moving from lab to land
- Showcase the project prior to the implementation with farmers in the field
- Testing more organic techniques
Research Trials

Methodology

• Random Block Design

• Tracking mint oil yield, cost of production, plant statistics, oil content, biomass

• Control treatments for each factor

• Analysis of Variance Procedure (ANOVA)
Research Trials

Key Findings

• With better spacing, optimal fertilizer inputs, and quality planting material doubling yields is possible while reducing the cost of production

• Menthol percentages from the farm are 70-75% and the MCX exchange requirement is 68% - Adulteration is REAL!

• Increasing spacing, reducing fertilizer costs, and frequency of irrigation cost of production was drastically reduced

• Great for educating extension and field staff
Gender Analysis

Background

• Communities where women are empowered have better outcomes in terms of health, education, and productivity

• Previous studies confirm that women play an important role in cultivation and harvesting but not in sale and marketing

• Low engagements in off-farm work for women

• Understand who in the community has influences on behaviors
Gender Analysis

Methodology

• 395 adults (53% men and 47% women) in 12 villages across two districts of Lucknow and Barabanki in Uttar Pradesh

• Focus group discussions, in-depth interviews with local and international NGOs
Gender Analysis

Key Findings

• Women have limited control in household decision making related to budgets, household finances, and markets

• Both men and women are supportive of efforts to promote income generating activity interventions in their communities

• Limited mobility for women in the villages
Institution & Resource Mapping

Background

• Understand the physical distribution of farmer organizations

• Understand farmer perceptions of different institutions and stakeholders

• Understand the factors that influence farmer decisions on selling mint oil
Institution & Resource Mapping

Methodology

• Quantitative and qualitative methods

• 1,257 farmers participated in FGDs, semi structured interviews, and social and resource mapping activities, across 20 villages in Barabanki and Lucknow
Key Findings

- No existing functional farm organizations, farmer groups, or self-help groups (SHGs)

- Only 1-2% of demand for quality planting material is met by the market

- Institution and stakeholder perceptions

- Farmers prefer cash

- Not receiving any support from extension services

- At harvest 70% is sold locally between June and September and 30% is stored to meet fixed and contingent expenses
# Phase II: Implementation

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<th>Challenge</th>
<th>Engagement</th>
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<td>Low Productivity &amp; Declining Profitably</td>
<td>On-Farm Interventions</td>
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<td>Gender Inequality</td>
<td>Women’s Empowerment Activities</td>
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<td>Supply Chain &amp; Access to Services</td>
<td>Farmer Producer Companies</td>
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On Farm Interventions

- Building Community By-In
- Registration of Farmers
- Establishing Farmer Groups & Lead Farmers
- Demonstration Plots, Training, & Stolon Supply

On-Going Local Extension Services
Women’s Empowerment Activities

- Financial Literacy
- Organizational Training
- Rights & Entitlements
- Leadership Training/Conflict Resolution
- GAP Training for Mint
- Savings & Lending
- Self Help Groups

Community engagement with men in support of women’s empowerment and the promotion of gender equality
Farmer Producer Companies

Promoting FPCs in the community to boost membership
Typical Mint Oil Supply Chain

- High velocity of transactions, everyone is a trader
- High levels of adulteration
New Mint Oil Supply Chain

- Shorter supply chain
- Traceable sourcing
## Phase II: Results

### Engagement

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<tr>
<td>16,373 Farmers with GAP</td>
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<td>41% Increase in Yield</td>
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<tr>
<td>250% Increase in Income from Mint</td>
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<td>40% Reduction in Water Usage</td>
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### On Farm Interventions

- 354 Self Help Groups covering 4,580 women farmers
- Savings increased by 72%
- 90% of SHGs have established bank accounts
- 16,373 Farmers with GAP
- 41% Increase in Yield
- 250% Increase in Income from Mint
- 40% Reduction in Water Usage

### Women’s Empowerment Activities

- 354 Self Help Groups covering 4,580 women farmers
- Savings increased by 72%
- 90% of SHGs have established bank accounts

### Farmer Producer Companies

- Four FPOs established including one all-women FPO (2,150 members)
- Forty tons of mint oil supplied into Mars Wrigley supply chain
- Input supply established
- Stolons supplied to 15,000 farmers
Phase III

Finding other sourcing partners to support the whole-farm approach

Scaling to new partners & new programmatic areas
Thank You!

Tanager: JBoulier@tanagerintl.org
Mars: Jeremy.Schifeling@effem.com
<table>
<thead>
<tr>
<th>Question Asked</th>
<th>Answer Given</th>
</tr>
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<tbody>
<tr>
<td>Does it mean that thru farmer producer company, you managed to move out from</td>
<td>Farmers do not sell via auction market in India. It is traded based on the Multi-Commodity Exchange prices, but selling is ubiquitous throughout. Our goal is to create a streamlined supply chain where farmers are selling more directly to the processing suppliers.</td>
</tr>
<tr>
<td>auction market in India?</td>
<td></td>
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<tr>
<td>How do you protect farmers income from the market volatility?</td>
<td>Since the mint oil market is large and there are only 22,000 farmers who will complete the program our primary focus has been reducing cost of production. By reducing the cost of production farmers can remain profitable, even with fluctuation in the price of mint oil. To date the average farmers reduction in COP is 24.6%</td>
</tr>
<tr>
<td>How are you planning to build/ensure sustainability for the FPCs?</td>
<td>Currently the project trains the board of directors of the FPCs and works with shareholders in the farmer producer companies to prepare them to be BODs. The project currently provides the management of the FPCs. Over the next 5 year period, once the FPC is established the project will transition the management of the company to an independent management team. The project is also exploring other service providers in the market place to assist the FPCs once Tanager leaves the project. Although practically the plan is to continue working with them likely for at least another 5 years to ensure an adequate transition time.</td>
</tr>
<tr>
<td>Please can you repeat the names of the partners your worked with on the ground</td>
<td>The Tanager India team is the lead. The implementation partners for this project include Tanager, Callison, Mars Wrigley, Read India, and Pratham.</td>
</tr>
<tr>
<td>in India - you mentioned two I think - one for farmer training and another on</td>
<td></td>
</tr>
<tr>
<td>gender equality.</td>
<td></td>
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<tr>
<td>How are you dealing to disease that affect mint?</td>
<td>As mint is a short season crop in India, it is only in the ground for 90-110 days and therefore does not get wilt or other diseases that are common in places where its kept in the ground for multiple years.</td>
</tr>
<tr>
<td>On the research trials, you don't touch anything on harvesting and post</td>
<td>We have run experiments in distillation efficiency and different dates of harvest. By improving the condenser units on the locally available distillation tanks we've seen yield increases from 10-15%. For different dates of harvest research has shown that its best to harvest 90 days after transplanting.</td>
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<tr>
<td>harvesting process?</td>
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Q&A from the audience

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<td>In Utter Pradesh, Mint is becoming farmer’s main crop and main livelihood income? Or only the complementary crop (meaning they have another main crop as farmer’s main living income)?</td>
<td>Mint is the number one source of cash by percentage of annual crop income. Farmers also sell a number of other crops but primarily mustard or potato prior to the mint season, and rice afterwards. The project area supports three growing seasons throughout the year.</td>
</tr>
<tr>
<td>In Gender Analysis, how many % women vs men involved in mint farming?</td>
<td>Woman in almost all of the households participate on the farm. Every mint farm has either labor that is performed by women during the year, either from the household or hired outside as farm labor.</td>
</tr>
<tr>
<td>FPC is a kind of farmer’s partnership program with industry?</td>
<td>An FPC is a farmer producer company that is a legal entity in India that operates much like a limited liability company with two major exceptions. The first is that shareholders must also be member farmers and regardless of the number of shares, all shareholders only get one vote.</td>
</tr>
<tr>
<td>What is the real program to reduce water usage in mint farming? drip irrigat</td>
<td>The main way the program has reduced the water footprint is through adding channels, improving water retention in the soils, and strategically irrigating the crop. On average the project has reduced the number of irrigation events by 2x per year. The project has experienced great results with drip, however there is not much adoption due to the fact that rice is grown immediately after the mint season so farmers are not willing to invest in a setup that can be removed for the rice season. The project exploring ways to lease equipment to farmers for the mint season as a service through the FPC. Research indicates sprinklers can have a negative effect mint oil yields due to the water landing on the leaves effecting the plants natural oil production process.</td>
</tr>
<tr>
<td>irrigat? sprinkler?</td>
<td></td>
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<tr>
<td>What is the yield evolution before vs after intervention to farmers you've done?</td>
<td>The yield from the baseline was 39 Kg per acre and now project farmers achieve 52 - 54 Kg per acre.</td>
</tr>
<tr>
<td>What form of caste / richer-poorer behavioural shifts did you identify?</td>
<td>The project has not completed the midline yet (will happen early 2020) so we don't have any behavioral data available related to social capital in the villages.</td>
</tr>
<tr>
<td>Impressive the drop from 27000INR to 20000INR - do you believe that you are now reaching optimal or is there another 10-20% to go in terms of reducing cost of production?</td>
<td>We believe that there is still some potential for further reduction of cost of production. By reducing diesel fuel usage from minimizing the frequency of irrigation, and mechanizing some of the farm activities could reduce labor costs from weeding, transplantation, and harvesting.</td>
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Community of Practice Updates

Webinar | Exploring gender considerations in farmer and worker categorization – Experience sharing with Better Cotton Initiative - Oct 24, 2019 2:30 PM - 3:30 PM BST.

Webinar | Visualising research results: Effects of Supply Chain Initiatives on Yield, Price, Costs, and Incomes - Oct 31, 2019 3:30 PM - 4:30 PM GMT

International Living Wage and Living Income Conference
5 & 6 November 2019 - Rotterdam (NL)
www.theonlywayisupconference.org
Thanks!
Stay informed!

Living income
Visit www.living-income.com and Sign up to the living income community of practice mailing list!

Living wage

SIGN UP FOR GLWC BENCHMARK RELEASES

Questions? Email us at:
livingincome@isealalliance.org