AgroTutor Academy: Annual report

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1. Background

Farmers in the Global South face significant challenges in accessing tailored educational resources to enhance their skills in critical areas such as communication, market access, and resource management. Traditional training programs often lack accessibility, personalization, and adaptability to cater to the diverse needs of small-scale and large-scale farmers. This results in a gap between the available knowledge and the practical skills required to navigate modern agricultural challenges effectively. There is a need for an inclusive, scalable, and user-friendly learning platform that provides personalized, context-specific education while accommodating the technological and connectivity constraints of rural regions.

Dedicated to enhancing the skills of the last-mile beneficiaries in the Global South, the AgroTutor Academy of the ICTforAg Learning Network, offers courses on critical areas such as communication, market access, and resource management, catering to both small-scale and large-scale farmers. Delivered through WhatsApp and online mode on a 1:1 basis, the courses provide a personalized learning experience that tracks individual progress to customize content based on evolving needs.
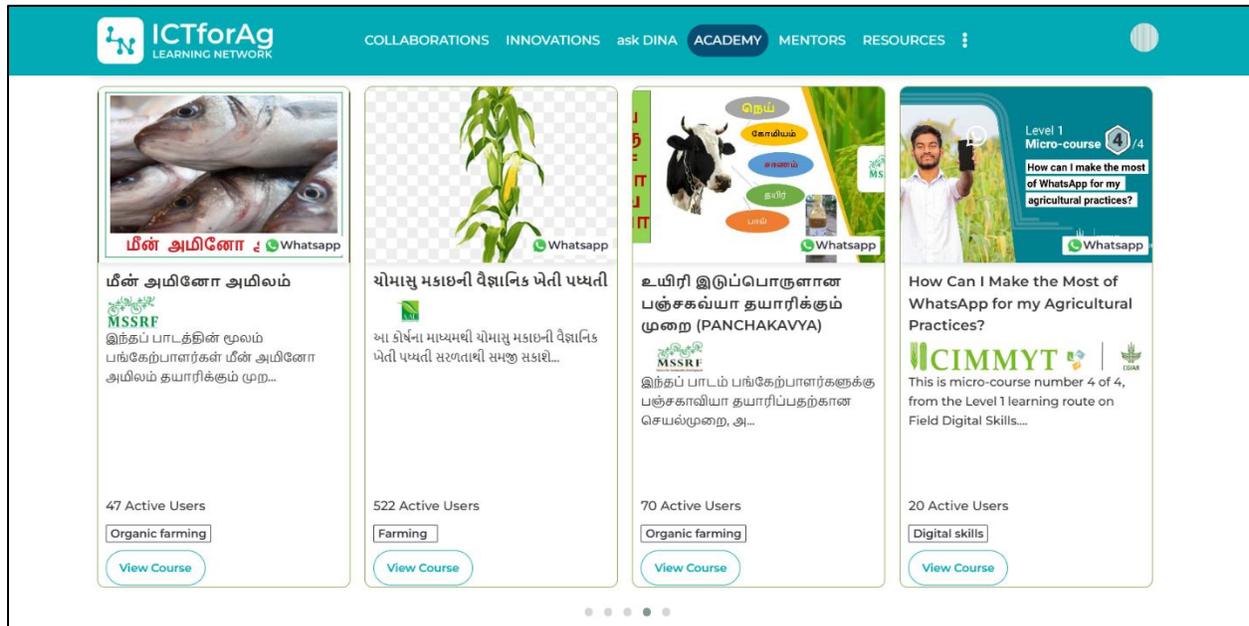

Figure 1: AgroTutor Academy of the ICTforAg Learning Network

Features of the Agrotutor Academy:

1. Hosts WhatsApp-based micro-learning modules tailored for the last - mile beneficiaries.
2. It has a specific Learning Management System that offers the partners/course creators the opportunity to use the platform and offer courses to its individual group of learners. This is highly customisable and needs very little training and it's open to all stakeholders.
3. The courses are designed for farmers and extension services with low digital literacy, allowing easy navigation by simply clicking buttons.
4. Courses available in multiple languages, ensuring inclusivity.
5. Assessments after each chapter help users evaluate their understanding.

AgroTutor Academy currently offers a diverse range of micro-courses tailored to the needs of farmers and agricultural professionals. The Academy hosts 20 WhatsApp-based micro-courses available in five languages - Spanish, English, Tamil, Gujarati, and Telugu - along with two online courses accessible via web platforms. With approximately 1,736 active users engaging in the WhatsApp-based courses, the Academy is fostering a meaningful impact by delivering accessible, practical, and multilingual education.

2. AgroTutor Academy

AgroTutor Academy is a decentralized platform designed to support partner organizations in their capacity-building initiatives. It enables these organizations to create and deliver WhatsApp-based courses effectively, offering a practical and accessible solution for training beneficiaries. In addition to partner-developed courses, AgroTutor Academy also offers micro-courses focused on field digital skills. These can be used by partner organizations or individuals to train beneficiaries, further broadening the platform's impact.

Figure 2: Course creation feature on the AgroTutor Academy

WhatsApp, being an integral part of daily communication, eliminates the need for extensive training or navigating a new app, making it an ideal medium for delivering educational content. Partner organizations play a crucial role in shaping the AgroTutor Academy, contributing to its growing repository of courses.

Courses on the platform are developed collaboratively by partners, including the M.S. Swaminathan Research Foundation (MSSRF), Anand Agricultural University (AAU), and International Crops Research Institute for Semi-Arid Tropics (ICRISAT).

M.S. Swaminathan Research Foundation (MSSRF) was the first launch partner of the AgroTutor Academy where the foundation had developed and hosted this WhatsApp-based micro-course on panchakavya, targeting 100 farmers in Puducherry in January. Developed by D.S. Girija, the Development Coordinator at MSSRF, the course has delivered promising results. As of now, the course has 69 active users, with 51 completions and 18 learners still in progress. Among the active learners, 36% are male, representing 25 learners, while 62% are female, totaling 43 learners.

In April, MSSRF launched a second course focused on the preparation of fish amino acid. This course gained traction, achieving 47 active users, 36 completions, and 11 learners still in progress. Among the active participants, 17 are male learners, accounting for 36% of the total, while 29 are female learners, constituting 61.7% of the active users. AgroTutor Academy's courses have garnered recognition for their impact, particularly through

partnerships like the one with MSSRF. One notable achievement is the publication of the Academy's efforts on the CGIAR website, highlighting how MSSRF utilized the platform to create the Panchakavya course. Read the article here: [WhatsApp courses for farmers to overcome India's productivity gap](#)

This article was also shared by **Ismahane Elouafi**, CGIAR Executive Managing Director, on LinkedIn. This reflects the significant impact that WhatsApp-based courses have had. Check the LinkedIn post here: [LinkedIn post](#)

Additionally, the CGIAR website featured a detailed impact story about the Panchakavya course, focusing on Vasuki, one of the learners. Vasuki's story exemplifies the transformative power of AgroTutor Academy's approach. Through the course, she not only mastered the preparation of Panchakavya, a traditional organic fertilizer, but also took on a leadership role within her community. Her newfound expertise allowed her to contribute to her household's farming practices and inspired her to teach others in her village how to prepare and use Panchakavya. Read the article here: [From homemaker to entrepreneur: Vasuki's journey with WhatsApp-based learning](#)

In August, Anand Agricultural University leveraged AgroTutor Academy to create a course on the Scientific Cultivation System of Monsoon Maize. Developed by Dr. Gaurangkumar Bhabhor, a Scientist (Extension Education), this course was introduced in the districts of Jhalod and Bhabor in Gujarat, reaching approximately 18,400 farmers. Currently, the course has 527 active users, with 20 completions and 502 learners still in progress. Among the active participants, 347 are male learners, comprising 66% of the total, while 175 are female learners, accounting for 33%. It remains one of the most active courses on the platform.

The CGIAR website featured an article about this course, highlighting how AgroTutor Academy enables farmers to learn best practices for increasing yields, managing pests, and adopting sustainable cultivation techniques - all from the convenience of their homes. Read the article here: [Growing smarter: WhatsApp course on maize cultivation launched for farmers in Gujarat](#)

ICRISAT also contributed to the Academy by creating a course on Sorghum Seed Multiplication in Telugu, tailored specifically for tribal farmers in Adilabad, Telangana. Coordinated by Krithika Anabazhagan, this course focuses on best practices for seed multiplication. It currently has 27 active users, with 15 completions and 12 participants still in progress. Among the active learners, 21 are male learners, accounting for 77.7%, while 6 are female learners, making up 22%.

AgroTutor Academy thrives due to the collaborative efforts of its partner organizations. By utilizing WhatsApp's simplicity and accessibility, these partnerships ensure the delivery of practical, high-impact knowledge to farmers and rural communities, bridging the digital divide and promoting agricultural innovation.

Following are the course metrics for above mentioned courses:

Course	Active learners	Completed	Ongoing
உயிரி இடுப்பொருளான பஞ்சகவ்யா தயாரிக (Panchakavya)	69	51	18
ચોમાસુ મકાઇની વૈજ્ઞાનિક ખેતી પઘ્ઘતી (Scientific maize cultivation)	527	20	507
மீன் அமினோ அமிலம் (Fish amino acid)	47	36	11
జొన్న విత్తన ఉత్పత్తి మరియు విత్తన భద్రత (Sorghum seed multiplication)	27	15	12

3. Micro-courses on field digital skills

CIMMYT has developed Level 1 and Level 2 micro-courses in both English and Spanish, specifically designed for farmers. These courses aim to promote the development of basic digital skills by leveraging WhatsApp as a learning management platform and incorporating current educational trends. The overarching goal is to support the integration of digital solutions into agri-food systems, enhancing farmers' capacity to navigate and benefit from technological advancements.

Level 1 micro-courses on field digital skills are designed to be simple and practical, covering topics such as connecting to Wi-Fi and staying safe while using the internet for agricultural practices. **Micro-course 1: How to Set Up Basic Functions of My Phone for My Farming Practice?** has 356 active users, with 58 completions and 298 learners yet to complete, including 252 male learners (70.7%) and 104 female learners (29%). **Micro-course 2: How to Connect to Wi-Fi for My Agricultural Practices?** has 40 active users, with 19 completions and 21 learners yet to complete, comprising 28 male learners (70%) and 12 female learners (30%). **Micro-course 3: How to Stay Safe and Prevent Data Theft While Using the Internet for Your Agricultural Practices?** has 94 active users, with 12 completions and 82 ongoing learners, including 66 male learners (70%) and 27 female learners (28.7%). **Micro-course 4: How Can I Make the Most of WhatsApp for my**

Agricultural Practices? has 20 active users, with 4 completions and 16 ongoing learners, including 14 male learners (69%) and 6 female learners (31%).

Level 2 micro-courses on field digital skills are slightly more advanced, covering topics such as setting up GPS and navigating through the internet. **Micro-course 1: How Can I Use GPS for My Agricultural Practices?** has 3 active learners, with 1 completion and 2 ongoing learners, including 2 male and 1 female learner. **Micro-course 2: How to Navigate, Search, and Make the Most of the Internet?** has 3 active users, with 1 completion and 2 ongoing learners, comprising 2 male and 1 female learner. **Micro-course 3: How Can I Improve Decision-Making with Agronomic Data Collection?** currently has no active users. **Micro-course 4: How to Start Collecting Data to Improve Agricultural Decision-Making?** has 1 active user.

The English Level 1 and Level 2 micro-courses have shown strong engagement among learners, particularly at Level 1. However, Level 2 English courses have seen lower participation, likely due to the advanced nature of the skills required, indicating a need for strategies to boost learner engagement.

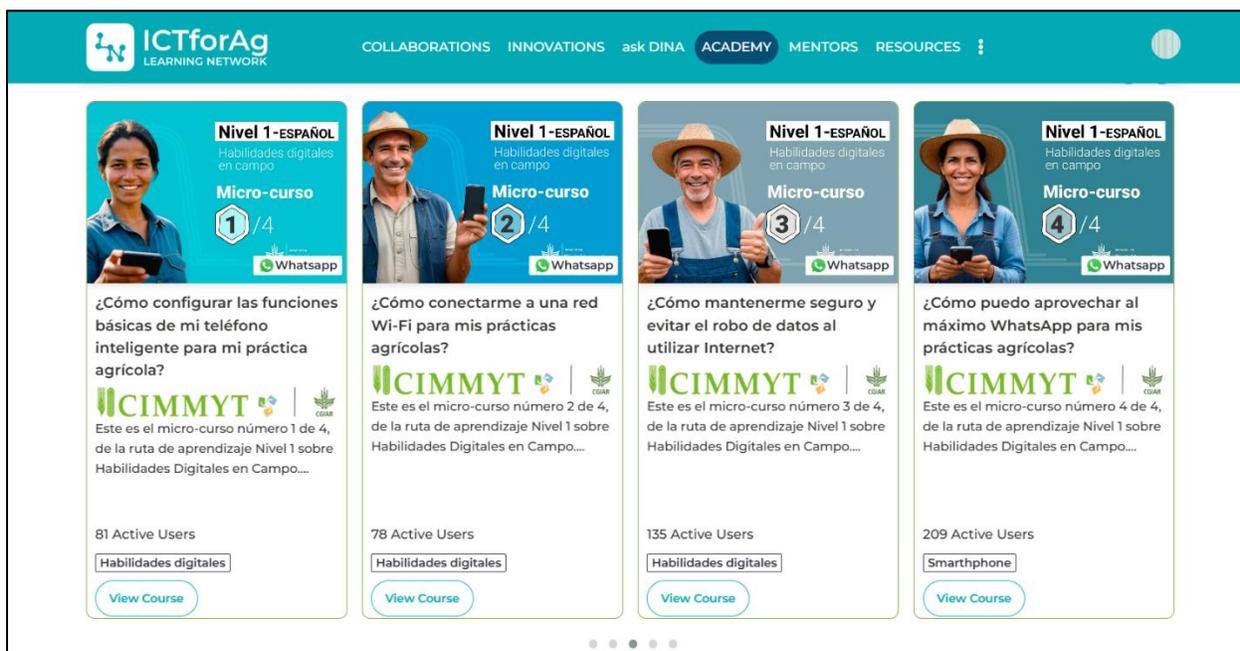*Figure 3: English Level 1 micro-courses on field digital skills*

Figure 4: English Level 2 micro-courses on field digital skills

Similar to the English courses, there are Spanish Level 1 and Level 2 courses covering the same field digital skills content. Level 1 **Micro-course 1: ¿Cómo configurar las funciones básicas de mi teléfono inteligente para mi práctica agrícola?** has 80 active learners, with 43 completions and 37 yet to complete, including 48 male learners (60%) and 32 female learners (40%). **Micro-course 2: ¿Cómo conectarme a una red Wi-Fi para mis prácticas agrícolas?** has 75 active learners, with 50 completions and 25 yet to complete. Of these, 37 are male learners (49%) and 33 are female learners (44%). **Micro-course 3: ¿Cómo mantenerme seguro y evitar el robo de datos al utilizar Internet?** has 135 active learners, with 98 completions and 37 yet to complete, including 56 male learners (41%) and 73 female learners (54%). **Micro-course 4: ¿Cómo puedo aprovechar al máximo WhatsApp para mis prácticas agrícolas?** has 206 active learners, with 117 completions and 89 yet to complete. Among the active learners, 109 are male (53%) and 86 are female (41%).

The Level 2 micro-courses in Spanish are slightly more advanced, similar to the English Level 2 courses. **Micro-course 1: ¿Cómo empezar a recopilar datos para mejorar la toma de decisiones agrícolas?** has 124 active learners, with 85 completions and 44 ongoing. Among these, 64 are male learners (49%) and 54 are female learners (44%). **Micro-course 2: ¿Cómo mejorar la toma de decisiones con la recolección de datos agronómicos?** has 31 active users, with 18 completions and 13 ongoing, including 22 male learners (70%) and 9 female learners (30%). **Micro-course 3: ¿Cómo navegar y consultar en internet? has 76 active learners, with 41 completions and 35 yet to complete.** Of these, 42 are male

learners (55%) and 28 are female learners (27%). **Micro-course 4: ¿Cómo se usa GPS para la agricultura?** has 168 active learners, with 89 completions and 79 ongoing, comprising 102 male learners (61%) and 63 female learners (37%).

The Spanish courses have demonstrated higher course completion rates compared to others on the platform. This success is attributed to the engagement strategy, where these courses are integrated into farmer training programs that emphasize course completion. This approach provides a strategic pathway to enhance learner engagement and ensure higher participation and completion rates.

Figure 5: Spanish Level 1 micro-courses on field digital skills

Figure 6: Spanish Level 2 micro-courses on field digital skills

This discrepancy may stem from the differing levels of difficulty; Level 1 courses are generally more accessible, while Level 2 courses demand a greater level of commitment and skill. To address this, it is essential to identify target audiences for both beginner and advanced courses and tailor engagement strategies accordingly.

Following are the course metrics for above mentioned courses:

Course	Active learners	Completed	Ongoing
Level 1 Micro-course 1: How to Set up Basic Functions of My Phone For My Farming Practice?	356	58	298
Level 1 Micro-course 2: How to Connect to Wi-Fi for My Agricultural Practices?	40	19	21
Level 1 Micro-course 3: How to Stay Safe and Prevent Data Theft While Using the Internet for Your Agricultural Practices?	94	12	82
Level 1 Micro-course 4: How Can I Make the Most of WhatsApp for my Agricultural Practices?	20	4	16

Level 1 Micro-course 1: ¿Cómo configurar las funciones básicas de mi teléfono inteligente para mi práctica agrícola?	80	43	37
Level 1 Micro-course 2: ¿Cómo conectarme a una red Wi-Fi para mis prácticas agrícolas?	75	50	25
Level 1 Micro-course 3: ¿Cómo mantenerme seguro y evitar el robo de datos al utilizar Internet?	135	98	37
Level 1 Micro-course 4: ¿Cómo puedo aprovechar al máximo WhatsApp para mis prácticas agrícolas?	206	117	89
Level 2 Micro-course 1: How can I use GPS for my agricultural practices?	3	1	2
Level 2 Micro-course 2: How to Navigate, Search, and Make the Most of the Internet?	3	1	2
Level 2 Micro-course 3: How can I improve decision-making with agronomic data collection?	0	0	0
Level 2 Micro-course 4: How to start collecting data to improve agricultural decision-making?	1	1	0
Level 2 Micro-course 1: ¿Cómo empezar a recopilar datos para mejorar la toma de decisiones agrícolas?	124	85	44
Level 2 Micro-course 2: ¿Cómo mejorar la toma de decisiones con la recolección de datos agronómicos?	31	18	13
Level 2 Micro-course 3: ¿Cómo navegar y consultar en internet?	76	41	35
Level 2 Micro-course 4: ¿Cómo se usa GPS para la agricultura?	168	89	79

4. Online courses on AgroTutor Academy

The online course module of AgroTutor Academy offers a platform for delivering focused digital learning content. Currently, it hosts three courses:

1. You Can Design a Digital Micro Course
2. Assess the Scaling Potential of Your Innovations: The Scaling Scan Digital Tool
3. International Certificate Course in Digital Agriculture

These courses highlight the flexibility of the online module in catering to diverse topics and needs. The course "You Can Design a Digital Micro Course" has attracted approximately 9 active users, while "Assess the Scaling Potential of Your Innovations: The Scaling Scan Digital Tool" currently has 36 active users. Additionally, the International Certificate Course in Digital Agriculture by the International Rice Research Institute (IRRI) has 5 active users. While these courses have seen some engagement, there remains significant potential for growth.

Figure 7: Online courses on the AgroTutor Academy

To enhance the impact of this module, it is crucial to:

- **Expand course offerings:** Encourage more partner organizations to design and contribute online courses that address a variety of topics relevant to the stakeholders of digital agri-food systems.
- **Boost learner engagement:** Actively promote the courses to potential learners through targeted outreach, partnerships, and effective communication strategies.
- **Leverage feedback:** Gather insights from current users to refine course content and improve user experience.

By addressing these areas, the online course module can become a robust resource, enabling AgroTutor Academy to reach a wider audience.

5. Initiatives to expand course reach

From the outset, AgroTutor Academy has received active responses to its courses, starting with the rollout of its first course. To further enhance accessibility and reach, a key initiative was implemented in September - the creation of QR codes for all WhatsApp-based courses (refer appendix). These QR codes were distributed among partner organizations and shared widely within farming communities, Krishi Vigyan Kendras (KVKs), and other relevant networks.

The process was designed to be simple and user-friendly. Learners only need to:

1. Scan the QR code
2. Send an auto-typed message
3. Enter basic details such as name and gender
4. Proceed with the course

Implementing the QR code system was not without challenges. The primary challenge was figuring out the technical flow to create and integrate course-specific QR codes. The solution required time and effort to develop and deploy effectively. Despite these initial obstacles, the response from partners and learners has been overwhelmingly positive.

The QR initiative has proven to be a valuable tool in reaching a broader audience and ensuring that more farmers and stakeholders can access AgroTutor Academy's courses.

6. Challenges and learnings

AgroTutor Academy has faced challenges but has also gained valuable insights that have shaped its operations and approach.

6.1 Technical challenges

One of the primary challenges has been addressing technical issues that arise from time to time. These difficulties underscored the importance of thoroughly testing courses before their rollout. Pre-launch testing ensures a seamless experience for learners, minimizes disruptions, and sets a standard for smooth course delivery and training.

6.2 Learner engagement

Encouraging participants to complete courses remains an ongoing challenge. Weekly reminders are sent to nudge learners. While follow-ups have proven effective, the need for innovative strategies to boost engagement and course completion rates is evident.

6.3 AI in creating course content

A key learning has been the successful integration of AI tools into the content creation process. These tools allow partners to generate multimedia elements - such as videos and audio - by submitting simple prompts and scripts. This approach has made it easier to create engaging and high-quality materials while simplifying partner training.

7. Way Forward

AgroTutor Academy has immense potential to reach a vast number of last-mile beneficiaries. By leveraging WhatsApp - a platform that is both familiar and accessible - the Academy simplifies the process of equipping farmers with essential skills and knowledge. However, to fully realize its potential, several strategic focus areas need to be prioritized:

7.1 Amplify existing courses

We should focus on expanding the reach of its current courses by collaborating with more partner organizations. Partners can use these courses to train their own beneficiaries, multiplying the impact of the WhatsApp-based courses. This approach ensures that existing resources are utilized to their fullest potential and reach a broader audience.

7.2 Expand partner engagement

A critical area of focus is onboarding new partners to create and host courses on AgroTutor Academy. By encouraging more organizations to contribute localized, relevant content, the platform can diversify its courses and extend its reach to different communities, addressing varied agricultural needs.

7.3 Localize courses in regional languages

To effectively engage with diverse farming communities, it is essential to offer courses in more local languages. Localization not only increases accessibility but also ensures that the content resonates culturally and contextually with the target audience. Expanding the language portfolio of the courses will be key to reaching communities that may not be fluent in dominant languages.

7.4 Strengthen online courses

Online courses are a promising area for growth. We should focus on amplifying the reach of existing online courses while actively promoting their adoption. Additionally, more effort should go into encouraging partners to design new online courses, which can cater to a variety of topics and learning needs.

By leveraging WhatsApp's accessibility and familiarity, the AgroTutor Academy has empowered partner organizations to create tailored courses that address diverse agricultural and digital skill needs. From improving farming practices to bridging the digital divide, AgroTutor Academy's decentralized model ensures that knowledge reaches those who need it most, fostering sustainable development and capacity building. As the platform continues to grow, the collective efforts of its partners, combined with the simplicity of its approach, position AgroTutor Academy as a cornerstone for empowering communities, enhancing livelihoods, and transforming the way knowledge is shared in the agricultural sector.

8. Appendix:

Figure 8: QR code poster for Panchakavya course (Tamil)

Figure 9: QR code poster for preparation of fish amino acid course (Tamil)

Figure 10: QR code poster for scientific cultivation of monsoon maize course (Gujarati)

Figure 11: QR code poster for sorghum seed multiplication course (Telugu)

Figure 12: QR code poster for all the level 1 and level 2 Spanish courses