Implementation of a Mobile-based Customised Advisory Service for Farmers of Odisha, India

Prepared for NAFHA Workshop on Digital Agriculture in Nepal

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PxD PRECISION DEVELOPMENT

Precision Development (PxD)
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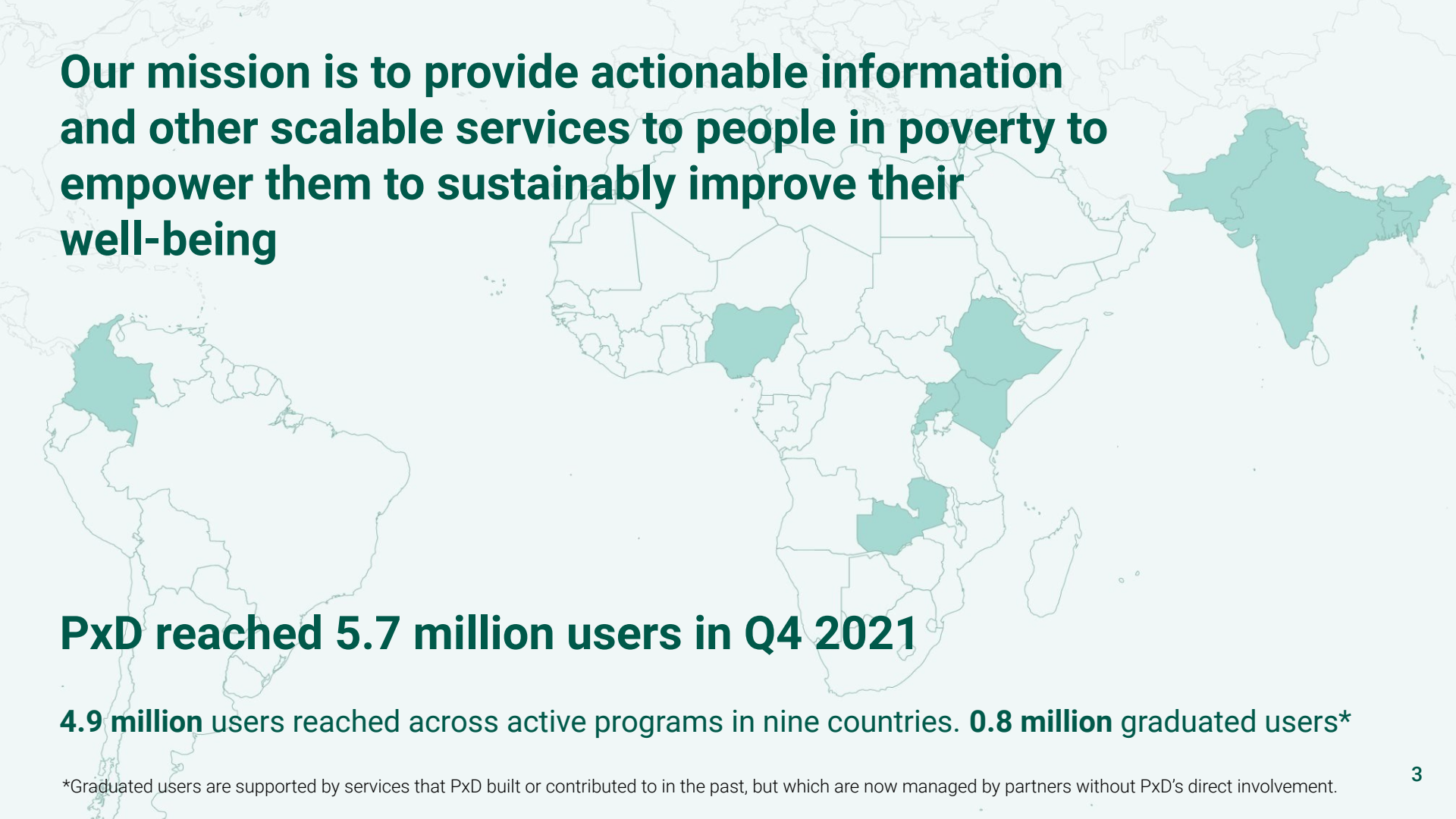
- ➔ PxD overview
- ➔ Ama Krushi: A service example
- ➔ Deep dive: Serving women farmers

Our mission is to provide actionable information and other scalable services to people in poverty to empower them to sustainably improve their well-being



PxD reached 5.7 million users in Q4 2021

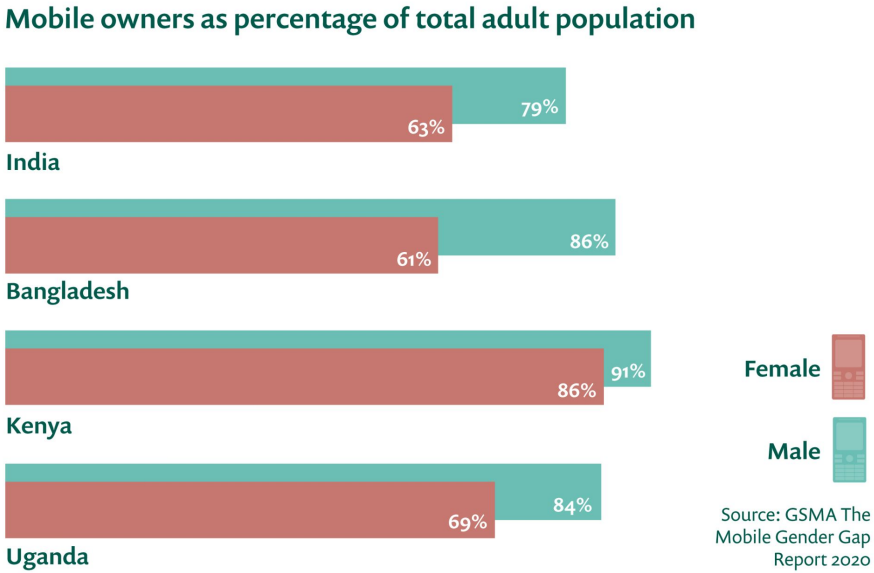
4.9 million users reached across active programs in nine countries. **0.8 million** graduated users*

*Graduated users are supported by services that PxD built or contributed to in the past, but which are now managed by partners without PxD's direct involvement.

Unfortunately, many smallholders are far from their full potential. They are stuck in a poverty spiral!

Like other value chain deliverables, information access has the ability to deliver meaningful changes in farmer behaviours & farm outcomes. High quality information exists, but farmers simply do not have adequate access

Opportunity: Mobile phones enable access at scale, and farmer-level data enables customization



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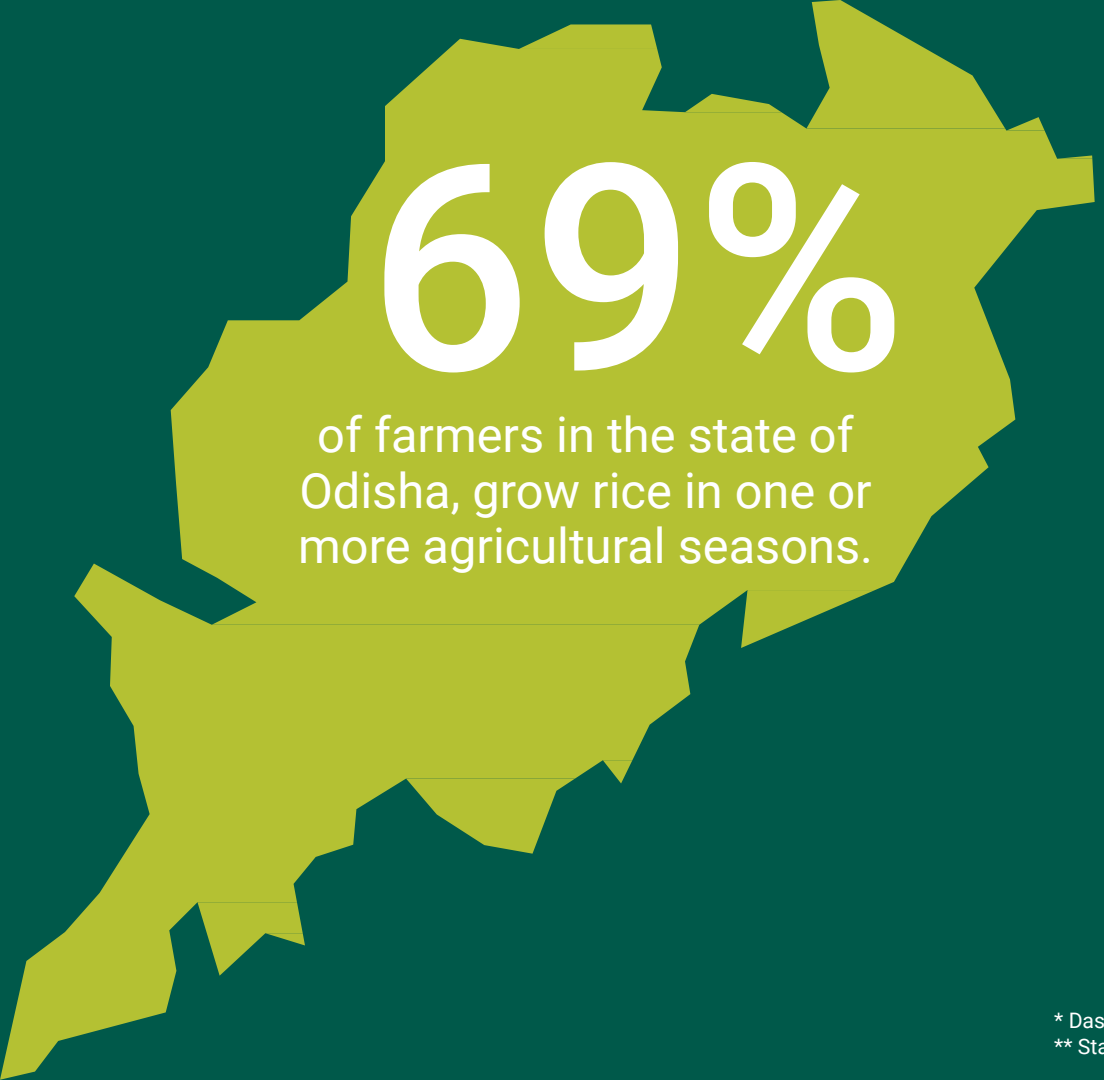
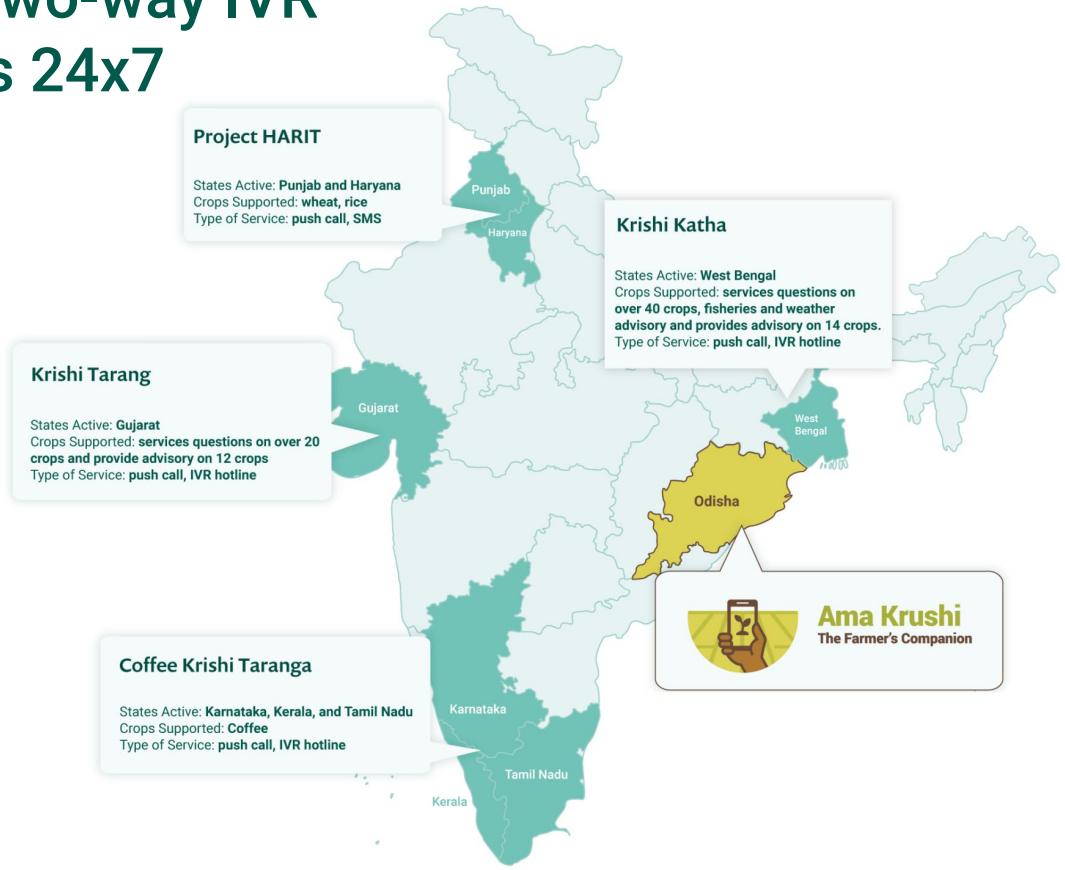


- Average rice yields in Odisha have been found to be 25% lower than the national average* and only 50% of the potential yields **
- Farmers found to be lacking knowledge on the latest and most appropriate seed varieties as well as on best practices
- For the small fraction of farmers whose knowledge is supplemented with advice, that information may be a) not timely, b) too infrequent, c) not relevant, or d) not trusted.

* Das, S. (2012). Rice in Odisha. Metro Manila, Philippines: IRRI
** Statistics, D. o. (2015-16). State of Indian Agriculture. New Delhi: Government of India

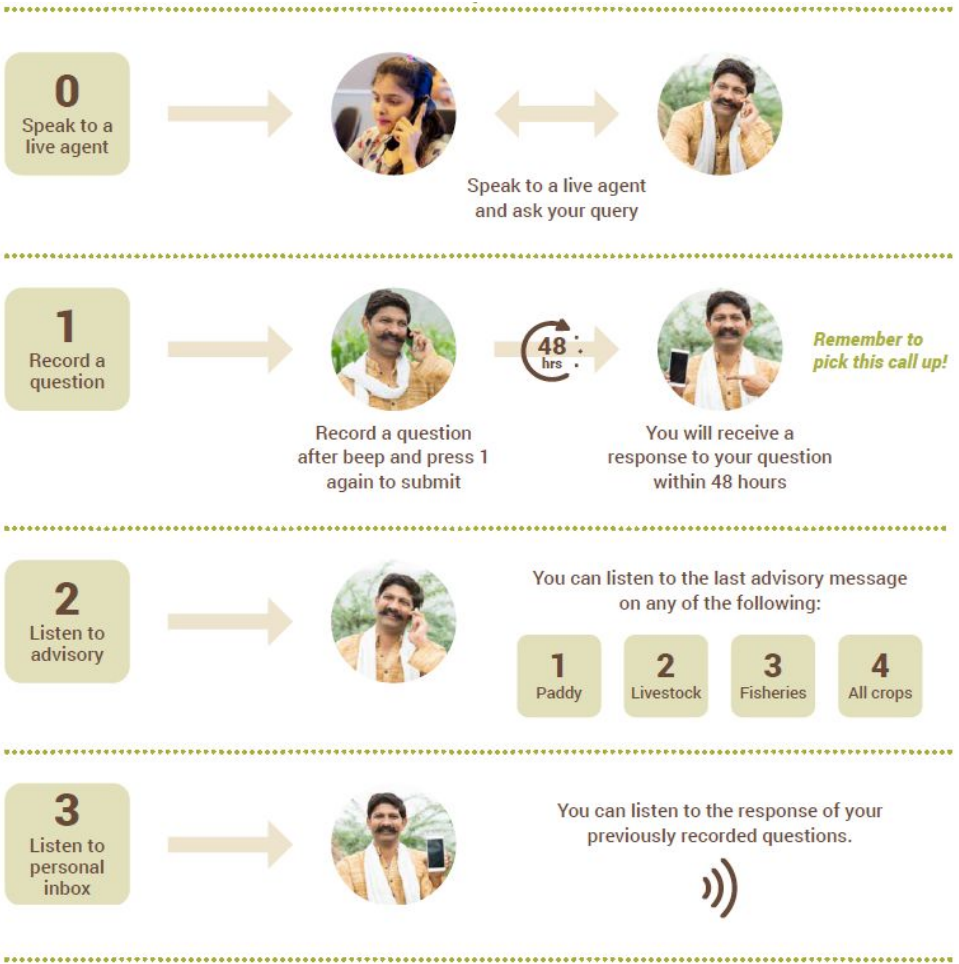
Ama Krushi: A customized two-way IVR helpline available to farmers 24x7

Model	Build - Operate - Transfer programme with the State Govt of Odisha (GoO); 2018 - 2022
Reach	Serving **2.2 million farmers** across all 30 districts in Odisha & growing
Content	Content across 20+ crops, livestock & fisheries
Partners	GoO, PxD, BMGF and JPAL-South Asia



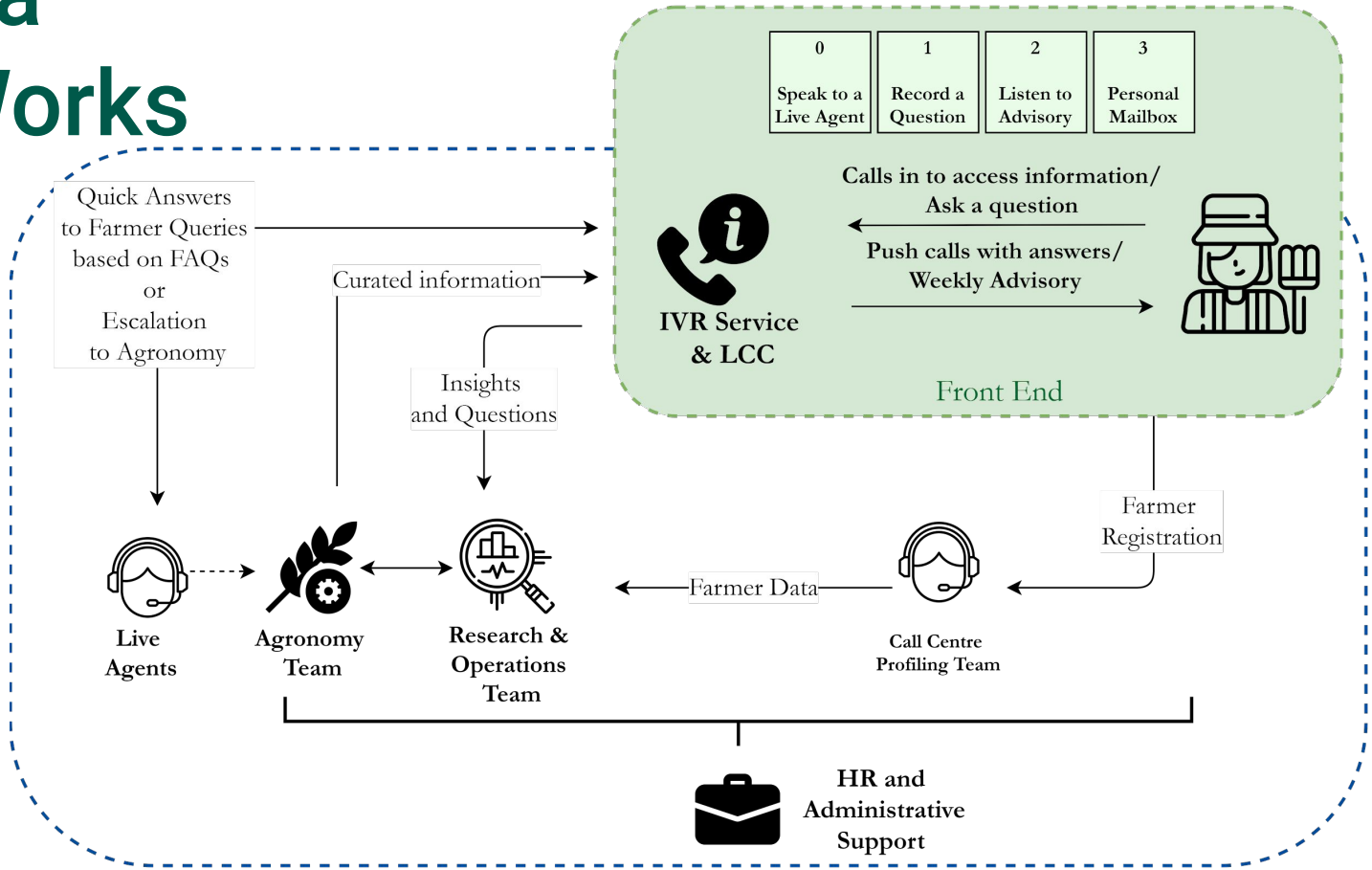
What do farmers get when they access 155 333?

- **Customized weekly advisory voice calls** with content tailored to farmer crop, agronomic conditions and location in local language
- **Timely reminders** to encourage adoption of the right practices
- **Access to an inbound hotline** to ask questions, listen to agronomic advisory or prices



Tried and tested with millions of Odisha farmers and extension workers across crops, livestock and fisheries.

How Ama Krushi Works



Blog on content process:
www.precisiondev.org/kharif-in-odisha/

All year round process

Odisha Crop Phases - Paddy

June	July	August	September	October	November	December	January	February	March	April	May
KHARIF											
Nursery Preparation	Transplanting / Sowing	Plant Growth	Plant Growth / Flowering	Flowering	Maturity / Harvesting	Harvesting					
					RABI						
					Nursery Preparation	Transplanting	Plant Growth	Flowering / Maturity	Harvesting		
										SUMMER	
										Lean Season / Soil Preparation	

Kharif: *Main growing season*

Rabi: *Secondary winter season*

Institutionalisation within the Department of Agriculture & Farmers' Empowerment (GoO)

Capacity Building	Ama Krushi training sessions conducted at block-level **with extension workers & community leaders** ("training the trainer model"); extension officers involved in farmer registration
Content Design & Validation	Content designed in collaboration with local university & dept experts (**Weekly Content Review Committee for livestock & agriculture**); integrated messaging across different bodies
Data for Decision-making	**Farmer engagement data shared weekly** (e.g. in Crop Weather Watch Group meetings attended by policy makers at various levels within the government); Participation in government pandemic response
Supplementing GoO's gender and inclusion strategy	Collaborations with **SC & ST department, Pradan** (a GoO partner), **FARD** to serve the diverse needs of farmers and provide targeted outreach (eg: through designated community resource persons)

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Female farmers in rural Odisha confront unique and gendered barriers that inhibit their ability to access and benefit from digital extension and other mobile advisory services.

Limited **agricultural decision-making power** regarding staple and cash crops

Disproportionately limited **access to mobile phones**

Low levels of **mobile phone literacy**, text literacy and numeracy relative to male farmers

At the beginning of **2019**, only **6.4% of AK farmers were women** - as of **Mar 2022**, **about 24%** of AK farmers are women

How we attempted to address this

Limited Access, Relatively Low Literacy

Found ways to disseminate information that did not heavily depend on tech literacy and/or access.

Lower Agricultural Decision Making Power

Identify practices where they do possess decision making powers (or even autonomy) and offer content that would be beneficial.

What options did we find?

Community Radio Stations, Live Call Centres

Partnering with grassroots NGOs on the ground would help us achieve stronger results

What did we discover?

Women had significant roles in Kitchen Gardens, Horticultural crops, Livestock & Fisheries

An example of how this materialised

2019

In **June 2019**, we conducted **focus group discussions** across women farmers in Odisha to ascertain how we can tailor this content to benefit women farmers.

Launched the **Kitchen Garden Pilot** across two districts with a sample of **4,483 farmers.**

Our data found that **84% of the women** farmers found this **content to be useful.**

Since 2020

Scaled the pilot to reach more than **88,000 women.** (till 2021)

Partnership with Pradan to increase women farmer enrollment through **training SHGs on mobile literacy and use of IVR.**

Service expansion to content on Livestock and Fisheries had a marked focus on women (also 25% of the cohort)

PxD'S Future Plans

Scale and Impact

Reach 100 million users, iterate and improve impact per farmer, and refine evidence base

New Technologies

Communications: WhatsApp, Telegram, photos, videos, chatbots, AR, VR

Data: weather forecasts, remote sensing, satellite, drone imagery, machine learning

New End Users

Extension workers, input suppliers, crop off-takers, etc.

New Sectors

Addressing information poverty more broadly, including education, nutrition, gender, etc.

Commercial Partnerships

For-profit agro-businesses (without excluding the poorest, or losing farmers' trust)

Geographic Expansion

Africa (additional states in Nigeria; DRC, West Africa, North Africa, etc.)

South Asia (additional states in India, Pakistan, Bangladesh; Afghanistan, etc.)

Latin America and Caribbean (Brazil, Colombia, Mexico, Peru, etc.)

Southeast Asia (Indonesia, Vietnam, Thailand, Myanmar, Philippines, etc.)

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Empowering users with quality information at their fingertips.

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