



digitalGREEN



www.digitalgreen.org |



[@digitalgreenorg](https://twitter.com/digitalgreenorg)

Agriculture Extension



Extension officer “commuting” between farms

Dissemination of expert agriculture information and technology to farmers

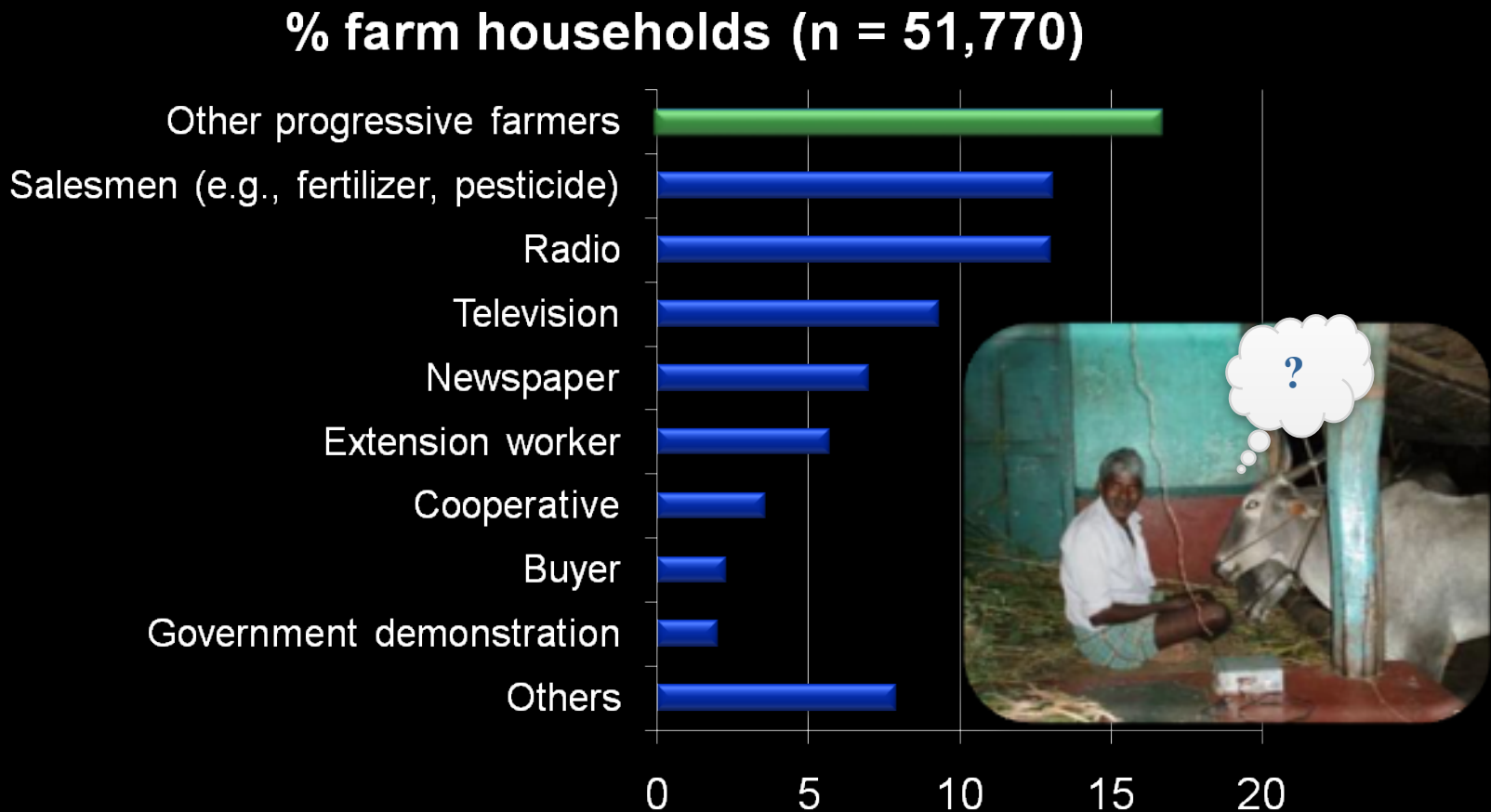
“Training & Visit” extension popularized by the World Bank in 1970s

- Face-to-face interactions of extension officers and farmers

100,000 extension officers in India

- Extension agent-to-farmer ratio is 1: 2,000
- 610,000 villages in India with average 1,000-person population

Agricultural Social Networks



Main source of information about new technology and farm practices over the past 365 days (India: NSSO 2005)

The Problem

How can the speed and effectiveness of agriculture extension be improved at a reasonable cost?



Extension officer on-field demonstration

Digital Video for Extension



Video provides...

- Resource-savings: human, cost, time
- Accessibility for non-literate farmers

Early Experimentation

Parameters Varied



Background of actors in video, Types of content,
Location and timing of screening, Method of dissemination,
Degree of mediation, Background of mediator etc.
Over 200 days of surveys, ethnographic investigation, and iterative design

Participatory Content Production

Introduction to innovations

- Standard extension procedure

Rough “storyboarding”

- Repetitive pattern; easy to learn
- Minimize post-production

Local farmers on their own fields

- Reduce perception of “teachers”
- Promote “local stars”



Digital Green System

Video Database

Online video database
<http://www.digitalgreen.org>

>4,000 videos, 28 languages, 8-12 minutes each

Quality-control, minor video editing, and metadata tagging

Indexed by type, topic, locale, season, crop, etc.

Distributed via memory cards

The screenshot displays the Digital Green Video Database interface. On the left, there are several filter sections: 'Partners' with a list including 'All Partners', 'PRADAN', 'BAIF', and 'GREEN Foundation'; 'Select Geography' with dropdowns for 'Select State', 'Select District', 'Select Block', and 'Select Village'; 'Select Language' with a 'Select Language' dropdown; 'Select Seasonality' with a list including 'All Seasons', 'Months', 'January', and 'February'; and 'Select Practices' with a list including 'All Practices' and 'KK - Low cost Vermicompost'. On the right, a list of video thumbnails is shown, each with a title, description, duration, production date, and viewer/adoption statistics. The videos include: 'Local poultry farm Oriya Pragati Odisha Poultry.' (00:15:32, 23 Feb 2011, 3751 viewers, 1156 Adoptions), 'Planting technique of Little gourd' (00:12:55, 12 Feb 2011, 6933 viewers, 1134 Adoptions), 'Harvesting of wheat' (00:08:36, 05 Feb 2011, 4485 viewers, 1033 Adoptions), 'AWARNES ON HYGIENIC LIVING Awareness.' (00:15:16, 20 Oct 2011, 2442 viewers, 1011 Adoptions), 'Safe Technique of Cotton Picking Cotton Piking.' (00:05:31, 03 Feb 2011, 1866 viewers, 876 Adoptions), and 'Planting technique in garlic cultivation' (00:13:20, 13 Oct 2010, 4843 viewers, 872 Adoptions).

Partners	Select Geography	Select Language	Select Seasonality	Select Practices
All Partners	Select State	Select Language	All Seasons	All Practices
PRADAN	Select District		Months	KK - Low cost Vermicompost
BAIF	Select Block		January	
GREEN Foundation	Select Village		February	

Video Title	Duration	Produced On	Viewers	Adoptions
Local poultry farm Oriya Pragati Odisha Poultry.	00:15:32	23 Feb 2011	3751	1156
Planting technique of Little gourd	00:12:55	12 Feb 2011	6933	1134
Harvesting of wheat	00:08:36	05 Feb 2011	4485	1033
AWARNES ON HYGIENIC LIVING Awareness.	00:15:16	20 Oct 2011	2442	1011
Safe Technique of Cotton Picking Cotton Piking.	00:05:31	03 Feb 2011	1866	876
Planting technique in garlic cultivation	00:13:20	13 Oct 2010	4843	872

Mediated Instruction

Local mediator

- Performance-based honorarium

Human engagement

- Field questions, capture feedback, encourage participation
- Balance genders

On-demand screenings

- Choice time and place
- Not “stand-alone” kiosk

Support and monitoring

- Daily metrics and feedback
- Official extension staff



Digital Green: Early Results

7 times more adoptions over classical extension

Sustained local presence

Mediation

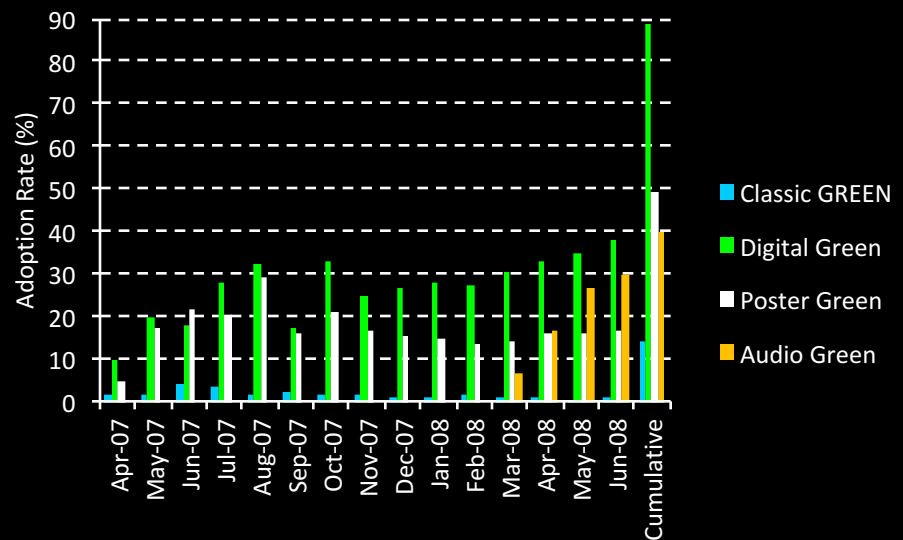
Repetition (and novelty)

Integration into existing extension operations

Social homophily between mediator, actor, and farmer

Desire to be “on TV”

Trust built from identities of farmers and villages in videos



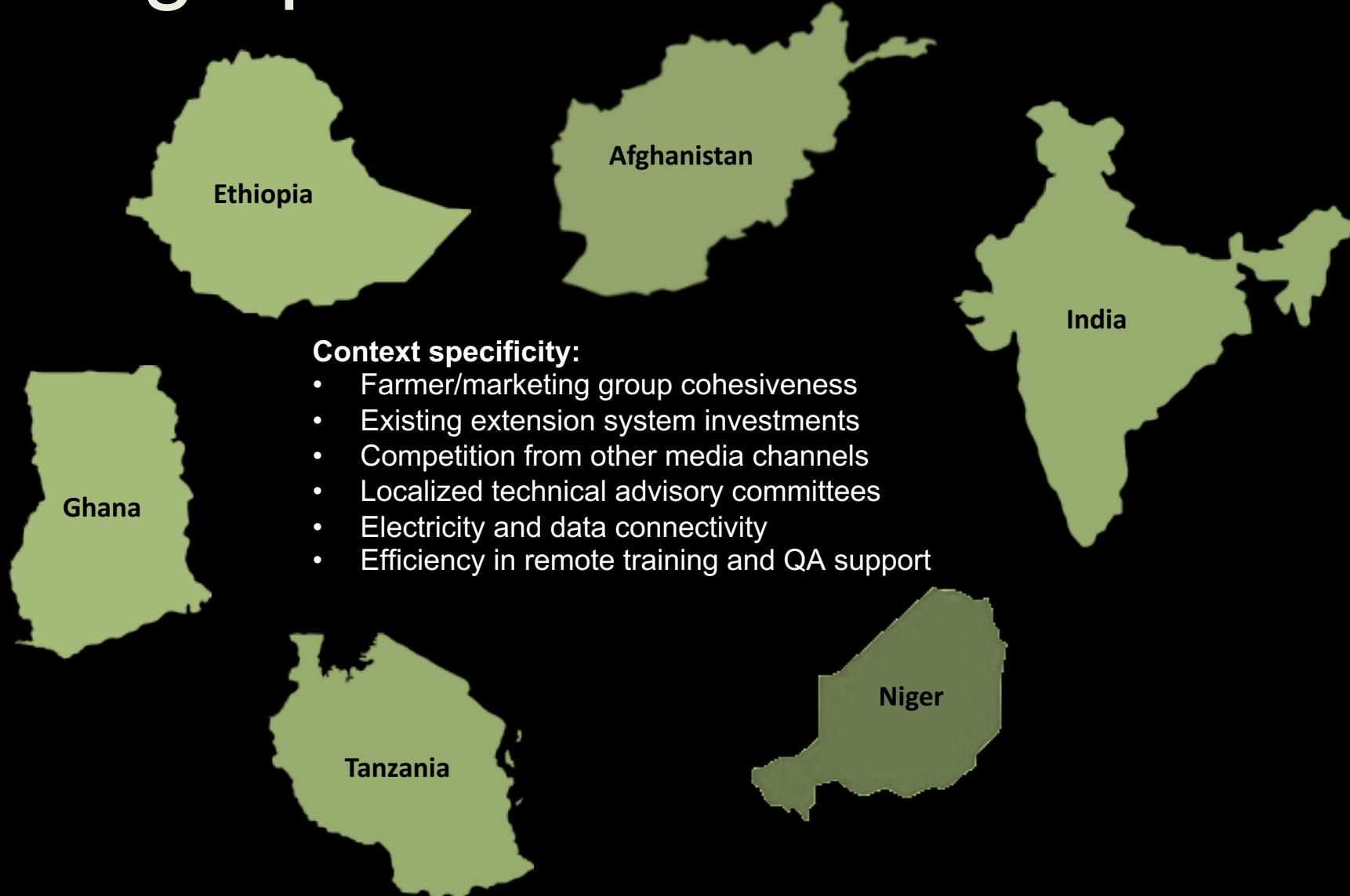
Cost-Benefit

System	
Classical GREEN	
Digital Green	
Poster Green	

Note: Decreasing amortized cost of hardware with time and scale

Digital **Green** is at least 10 times more effective
per dollar spent than classical extension!

Geographies



Ethiopia

Afghanistan

India

Ghana

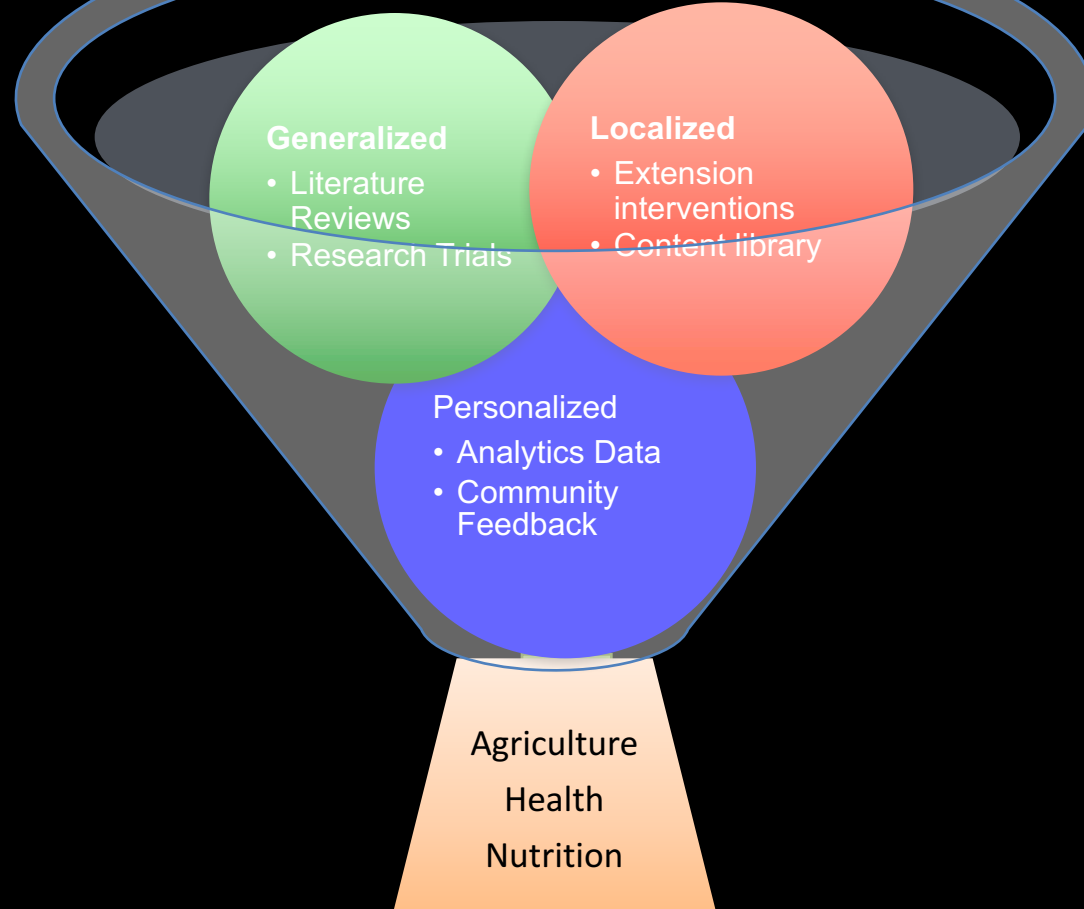
Tanzania

Niger

Context specificity:

- Farmer/marketing group cohesiveness
- Existing extension system investments
- Competition from other media channels
- Localized technical advisory committees
- Electricity and data connectivity
- Efficiency in remote training and QA support

Integrated Delivery



**Development Group
Savings/Credit**



**Raised Bed
Nursery**



Seed Treatment



**Exclusive/early
Breastfeeding**

...

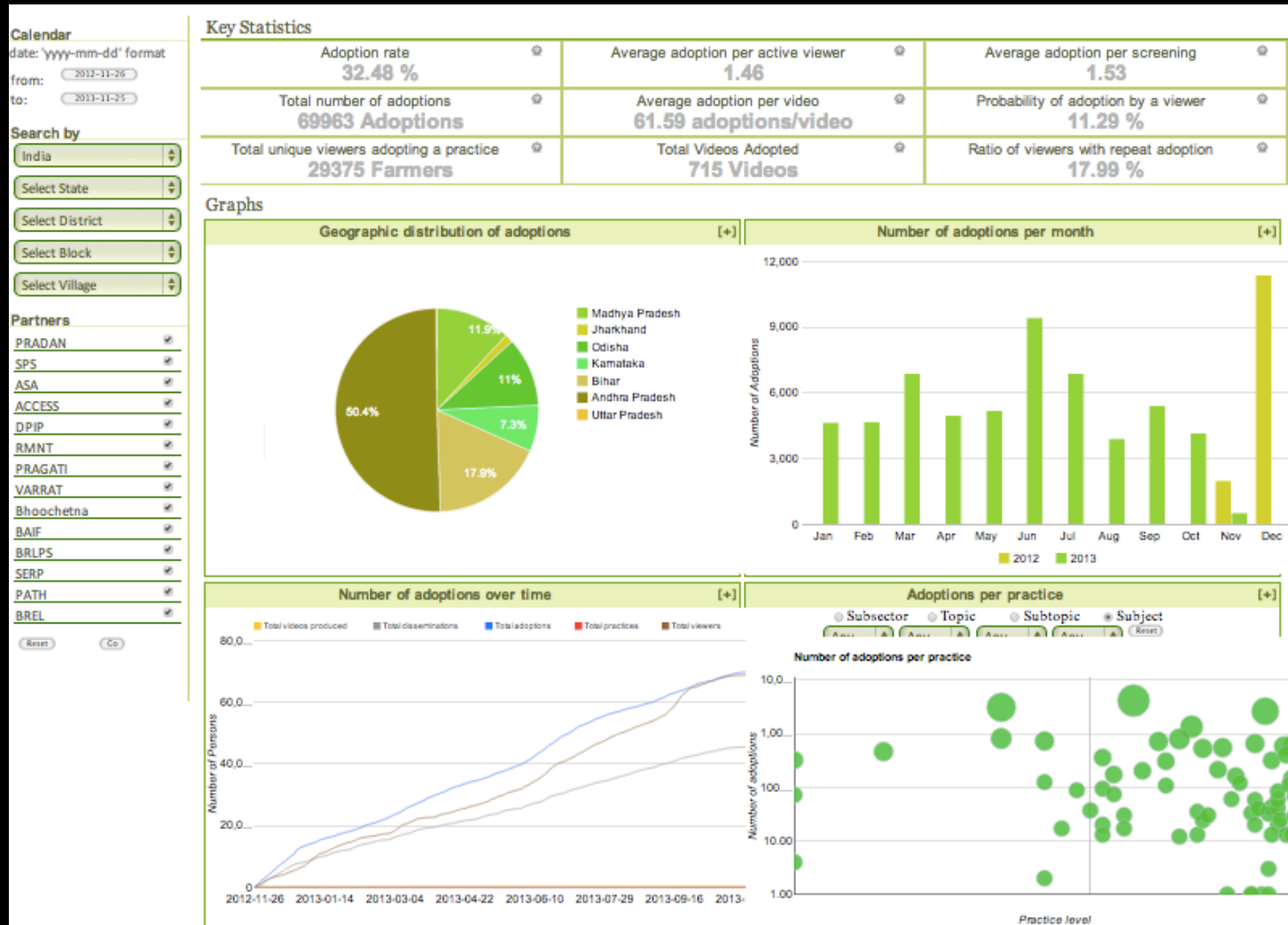


**Cooperative
Linkages**



**Government
Schemes**

Digital Green Technology Analytics



Digital Green Technology

Video Courseware

CLEAR ALL

State

Language

Partner

Category

Subcategory

Topic

Subject

212 Collections Found

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18

30 Videos | 03:51:56

NPM Pest Management
Andhra Pradesh | Telugu
By: SERP
43.6k | 152.1k | 17k

12 Videos | 01:39:01

NPM Growth Enhancers
Andhra Pradesh | Telugu
By: SERP
32.4k | 124.8k | 12.1k

25 Videos | 05:11:48

Sowing
Orissa | Oriya
By: VARRAT
32.5k | 78.4k | 6,593

06:36

1. Preparation of
Neemasthram

03:42

2. Preparation of
Pullatimajiga

07:54

3. Preparation of
Agnisthram

16:15

4. NADEP Compost
Filling

15 Videos | 01:40:26

Cotton (Kapas)
Madhya Pradesh | Neemadi
By: ASA
8,149 | 33.1k | 6,036

17 Videos | 01:34:14

Wheat
Madhya Pradesh | Neemadi
By: ASA
7,263 | 30.2k | 5,772

13 Videos | 02:16:39

System of Rice Inten...
Bihar | Thethi
By: BRLPS
19.7k | 36.3k | 5,144



G Laxmi
Ghanajeeamrutham lo avu muthram yenni Ltr
2012-08-20

G Laxmi
Ghanajeeamrutham valla labam yemiti
2012-08-20

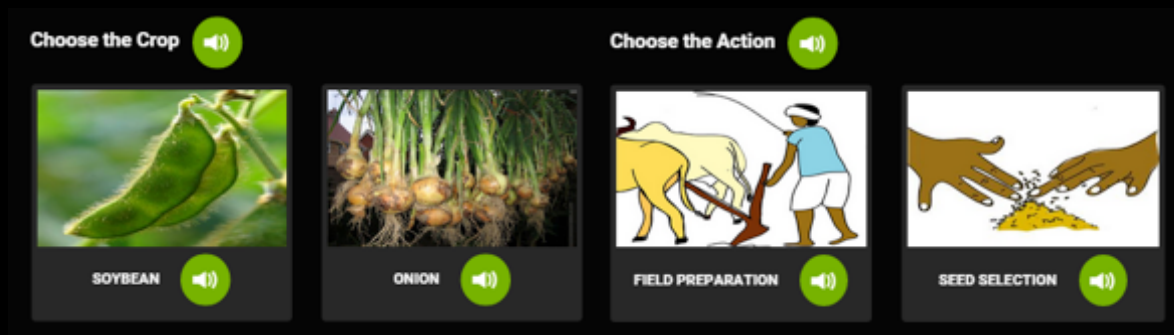
T Vimalamma
Ghanajeeamrutham lo peda yenni KG lu
2012-08-19

C Sayamma
Ghanajeeamrutham chesina taruvata yemiti lo challukovali
2012-08-19

Digital Green & Microsoft Research Technology

Video Kheti (Web App)

Multimodal
interface



Responsive
Design



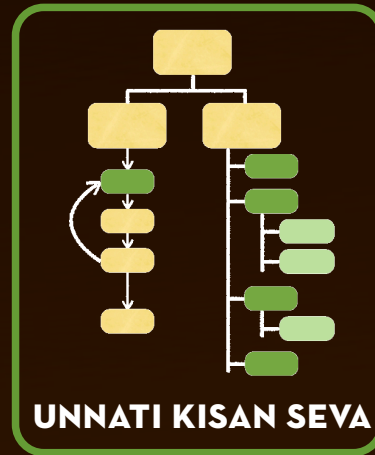
Digital **Green** & Awaaz.De Technology

Voice Services



AGRI-SP/CSP/FARMER

Question →
← Answer



Review



Approve,
Assign



CMS

Question →
← Answer



MODERATOR



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