Agriculture & Natural Resource Scientists' Biodiversity Information Needs:

Barriers and Facilitators to Use and Access in the US Southeast

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IIALD 2013 World Congress
Ithaca NY USA

USGS
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THE UNIVERSITY of TENNESSEE
Center for Information and Communication Studies

Today's Presentation

- What is the problem with AgNR and biodiversity information needs?
- What do we already know about it?
- What did we do about it?
- What did we find out about it?
- What does this mean to you?

Problem

Biodiversity information and data are critical to Agriculture & Natural Resource scientists' (AgNR) research, management and sustainability efforts,

BUT → Difficult for information professionals:

- what and what kind of biodiversity information?
- is most needed?
- in what form(s)?
- how it is needed?
- how are AgNR needs different from other life scientists?

What we know

Information Needs ≠ Research Needs

- Multiple formats (observation, experiment, raw, image, summarized, computed)
- Integration & Interoperability
- Description and Documentation (Metadata)
- Access.
- Data gaps.
- Research questions.
- Analyses.
- Geographies.
- Populations.
- Methods.

What we know

Barriers

- Data deluge vs. data loss. (Hey & Trefethen 2003, Diekmann 2012)
- Lack of metadata. (Tenopir et. al. 2011)
- Numerous and varied information sources. (Young 2011, Williams 2012)
- Researchers relying on science colleagues. (RIN & British Library 2009)

What we know

Preferred attributes

- Currency. (Laihonen, Kalliola & Salo 2004, Diekmann 2012, Young 2011)
- Usability. (Laihonen, Kalliola & Salo 2004, RIN & British Library 2009. Young 2011)
- Interoperability of software and systems (RIN & BL 2009)
- Life scientists less interested in completeness and specificity than accessibility and trustworthiness (RIN & BL 2009)

US Southeast

Biodiversity Hotspot

- Richest aquatic fauna of any temperate area of the world.
- Center for diversity for salamanders.
- Highest levels of endemism and diversity for freshwater mussels, crayfish and fish.

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What we did

Internet survey of biodiversity information needs and practices:

- Inivited all faculty in Life Science and Agriculture & Natural Resource Science at major universities in the US SE
- USGS partners and stakeholders
- Non-profits, natural history collections, herbaria
- State fish and wildlife agencies

457 → 222 → 169 (76%):

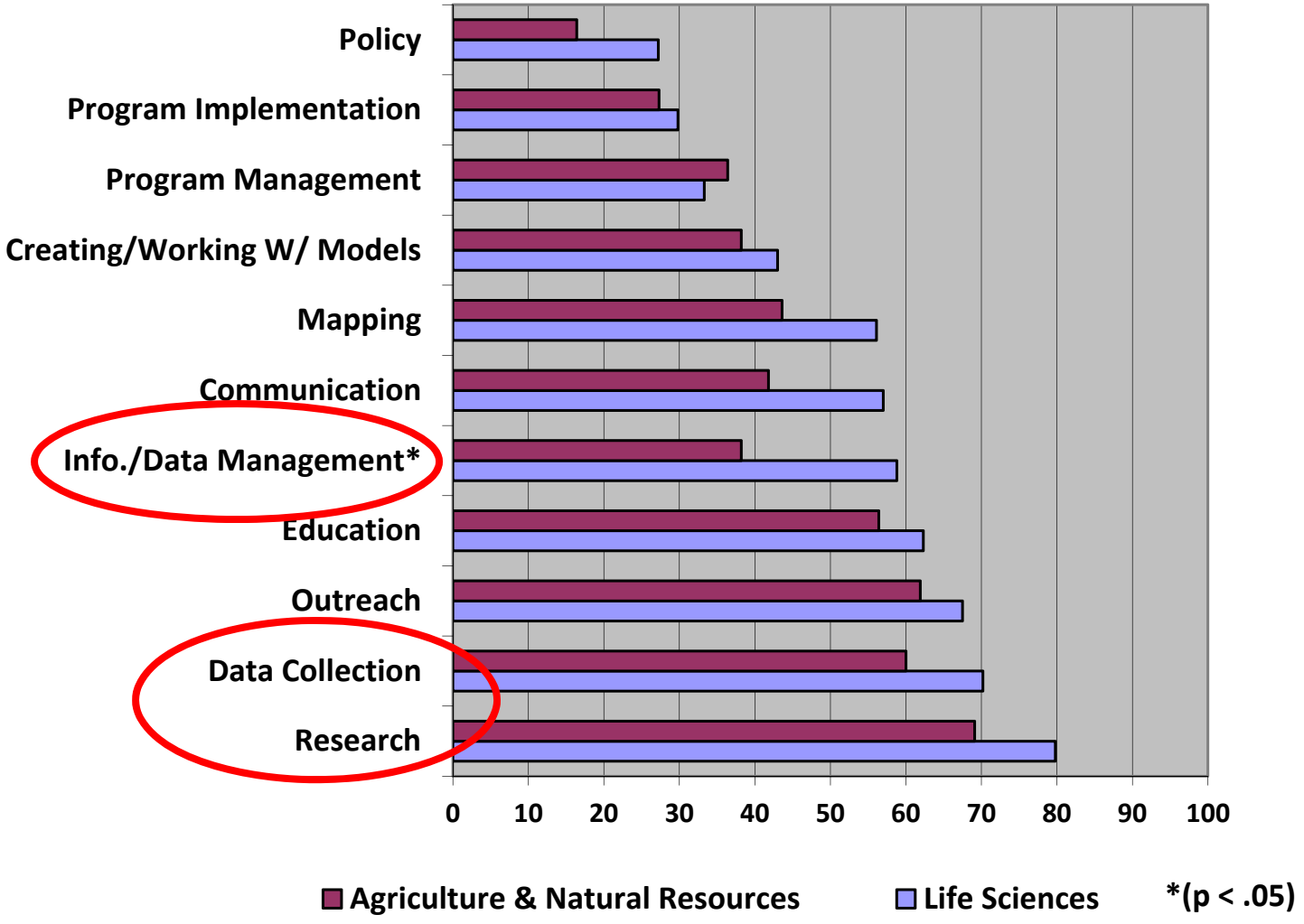
Agriculture & Natural Resources (AgNR) and Life Science (LifeSci)

What we found

Work Sector	AgNR (n = 55)	LifeSci (n = 114)	Total (n = 169)
Academic	67.3%	57.9%	60.9%
Government	14.5%	21.9%	19.5%
Not for Profit	16.4%	17.5%	17.2%
For Profit	1.8%	2.6%	2.4%

What we found:

Biodiversity Related Activities Included in Your Work (%)



What we found

82% say **Half** or **More Than Half** of the information they need to do their work **relates *specifically* to biodiversity**.

25% say that information is **Difficult** or **Very Difficult to find**.

72% of **Agriculture and Natural Resource** say Half or More Than Half relates *specifically* to biodiversity.

30% of **Agriculture and Natural Resource** Difficult or Very Difficult to find.

87% of **Life Science** say Half or More Than Half relates *specifically* to biodiversity.

22% of **Life Science** Difficult or Very Difficult to find.

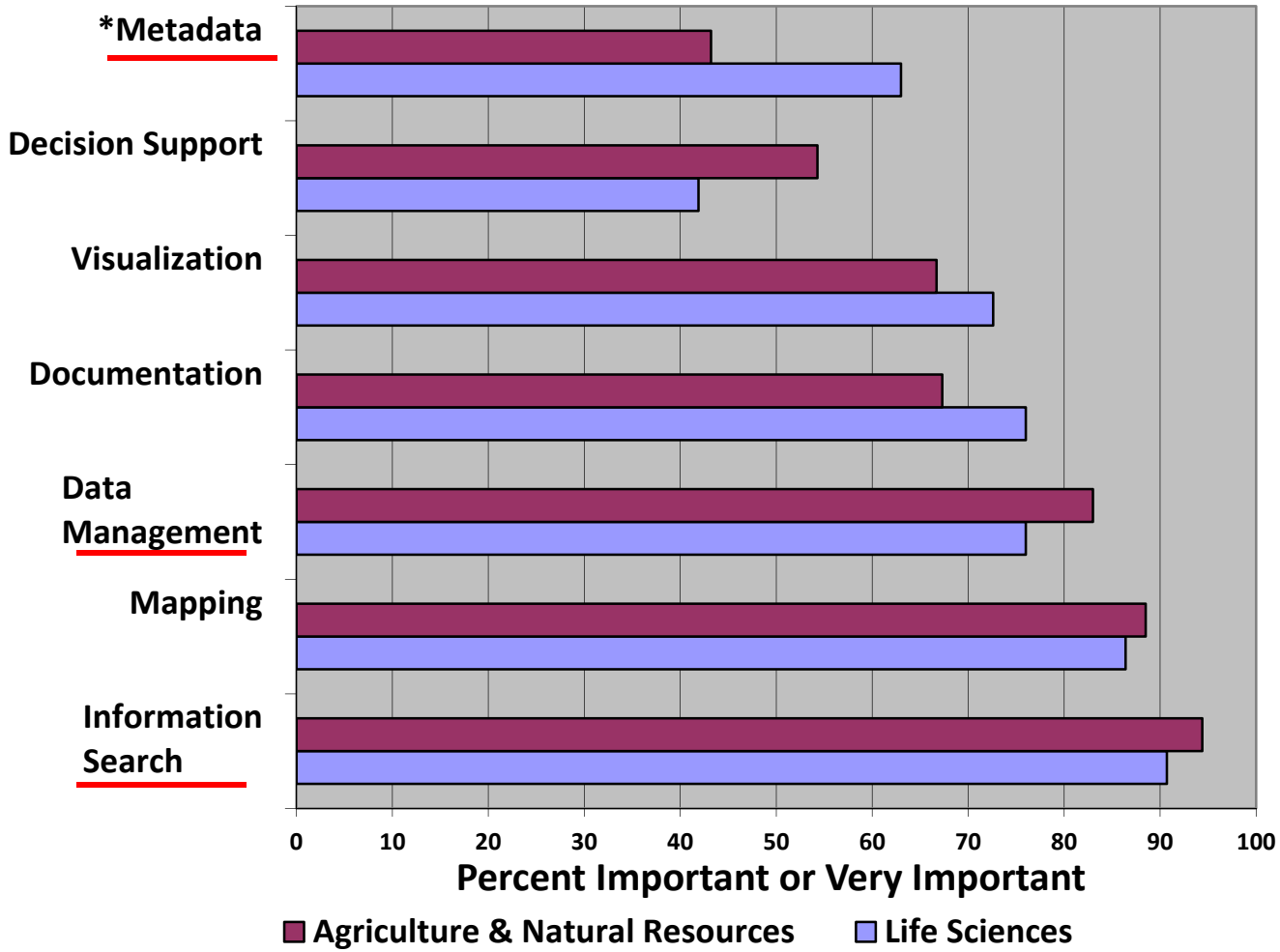
Half or More Than Half the Biodiversity Information Needed to Do Work

vs. Difficulty Finding It

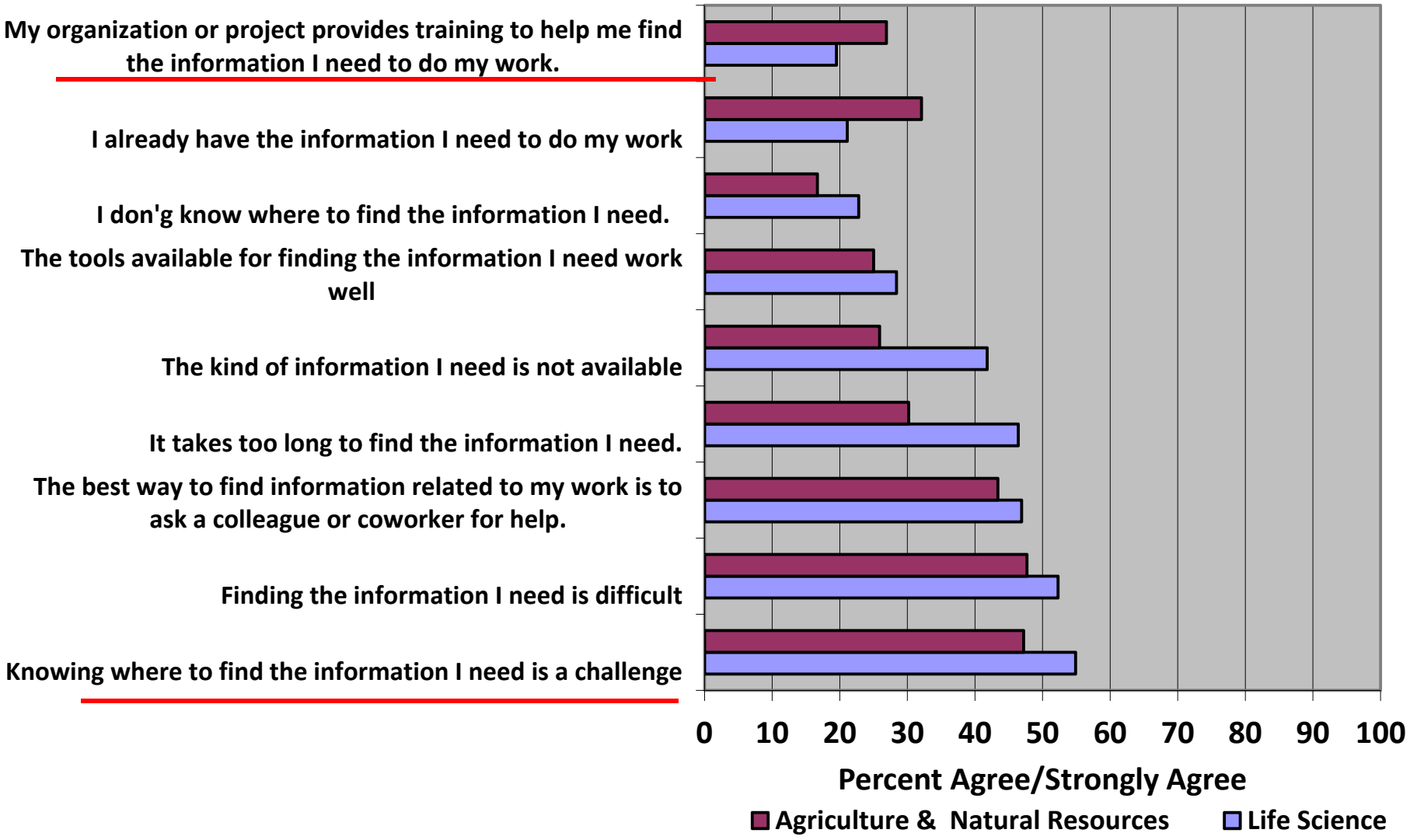
Type	AgNR		LifeSci		Total	
	Need	Difficult to Find	Need	Difficult to Find	Need	Difficult to Find
Raw Data*	50.9%	76.5%	77.7%	69.4%	68.9%	71.7%
Summarized Data	69.1%	65.4%	61.3%	58.2%	63.9%	60.5%
Data Models	51.9%	82.6%	50.0%	82.2%	50.6%	82.4%

What we found:

Importance of Biodiversity Information Tools



Barriers / Facilitators to Finding Needed Biodiversity Information



Most Limited By

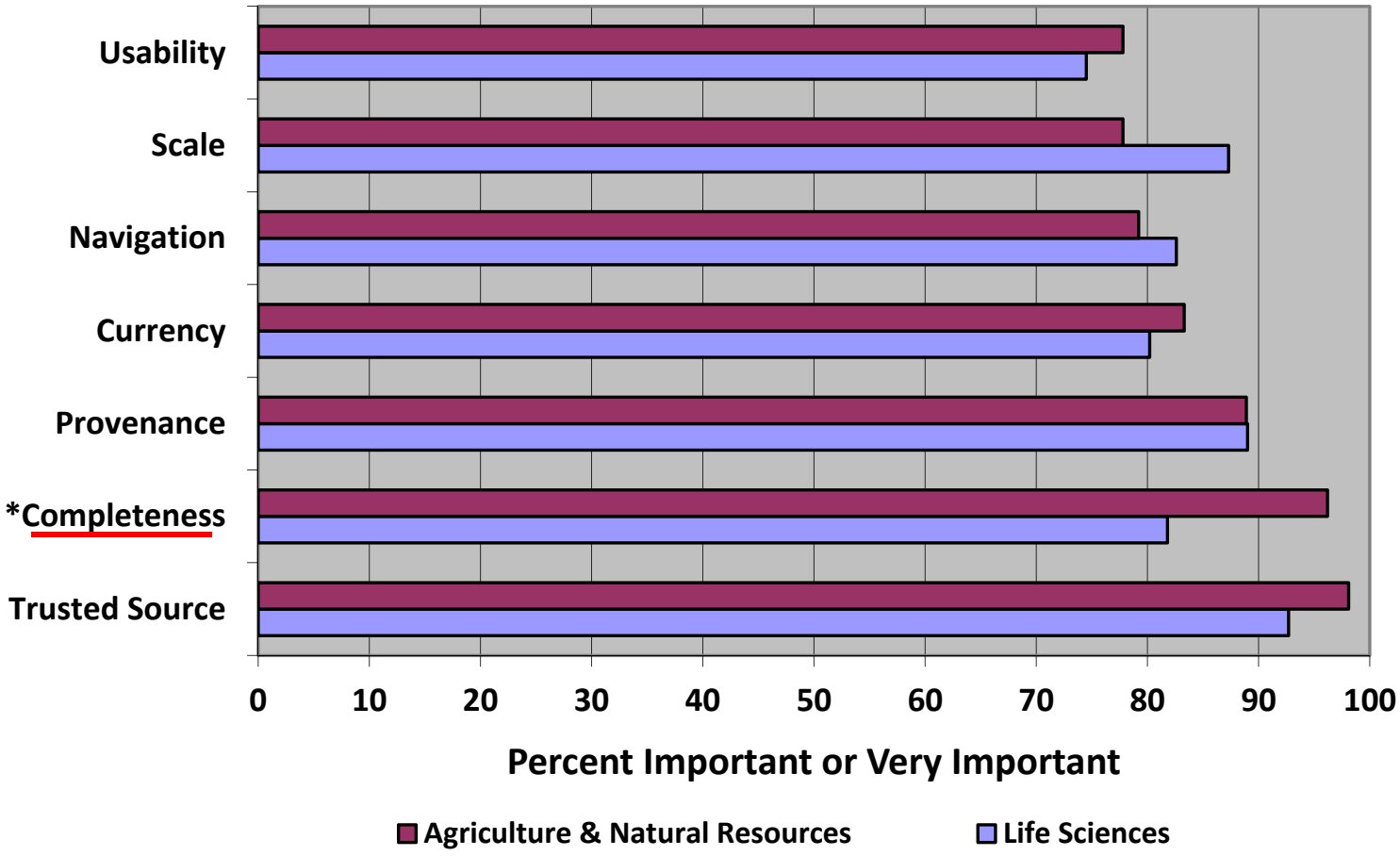
	Agriculture & Natural Resources (n = 54)	Life Science (n = 113)	Total (n = 167)
Time	35.2%	31.0%	32.3%
Lack of available information	13.0%	24.8%	21.0%
Lack of appropriate information	17.7%	13.0%	16.2%
Not knowing where to look	15.0%	9.3%	13.2%
*Not being able to access the information that is available	5.3%	16.7%	9.0%
Not knowing how to find what I need	6.2%	13.0%	8.4%

Information Sources

- 58.6% Regularly Consult 2 – 5 sources.
- 23% Regularly Consult 6 or more
- Only 15% Regularly Consult 1.

Information Source	Agriculture & Natural Resources %	Life Science %	Total % (n = 169)
***USDA (US Department of Agriculture)**	70.9	47.4	55.0
State Environmental or Wildlife Resources Agencies	49.1	54.4	52.7
***NatureServe**	25.5	42.1	36.7
***NRCS (Natural Resources Conservation Services)**	49.1	24.6	32.5
***NOAA Climate Services**	40.0	24.6	29.6
***Other**	18.2	35.1	29.6
NCDC (National Climactic Data Center)	25.5	15.8	18.9
LTER (Long-Term Ecological Research Network)	10.9	18.4	16.0
USGS Office of Global Change	20.0	14.0	16.0
Cornell Lab of Ornithology	9.1	17.5	14.8
IPCC (Intergovernmental Panel on Climate Change)	12.7	12.3	12.4
NASA (National Aeronautics and Space Administration, eg. MODIS or LANDSAT Programs)	12.7	11.4	11.8

Information Source Attributes



Conclusions

- Biodiversity is a major topic for AgNR scientists.
  - Biodiversity related work is the major portion of work for 72% AgNR respondents.
- AgNR are having a little more difficulty finding the biodiversity information they need than LifeSci .
  - 1/3 vs. 1/5
- AgNR need more summarized data than raw data.
  - 65% of AgNR say finding the summarized data they need is Difficult/Very Difficult.
  - But raw data is still at least 50% of what 50% of AgNR scientists need.

Conclusions

- Only 38% of AgNR include information / data management in their work. (58% Life Sci), → BUT 27% say their organization provides training. (20% LifeSci).
  - ???
  - Data managers? Relationships?
- Information search skills are the <u>most important</u> biodiversity information tools to ALL respondents.
- There is no clear / single barrier to aim at.
- No one has any time!

Implications

- Evaluate training that is occurring.
- Further study of information management practices among AgNR scientists.
  - Include investigations of data managers and relationships to scientists.
- One size does not fit all.
- Proactive, collaborative, embedded approaches.
- Push methods (tweeting, listservs)
- Peer to peer training.
  - Capitalize on “ask a colleague”, skills of LifeSci existing collaborations.

THANK YOU.

QUESTIONS?

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Emerging Priorities for Scientific & Agricultural Information

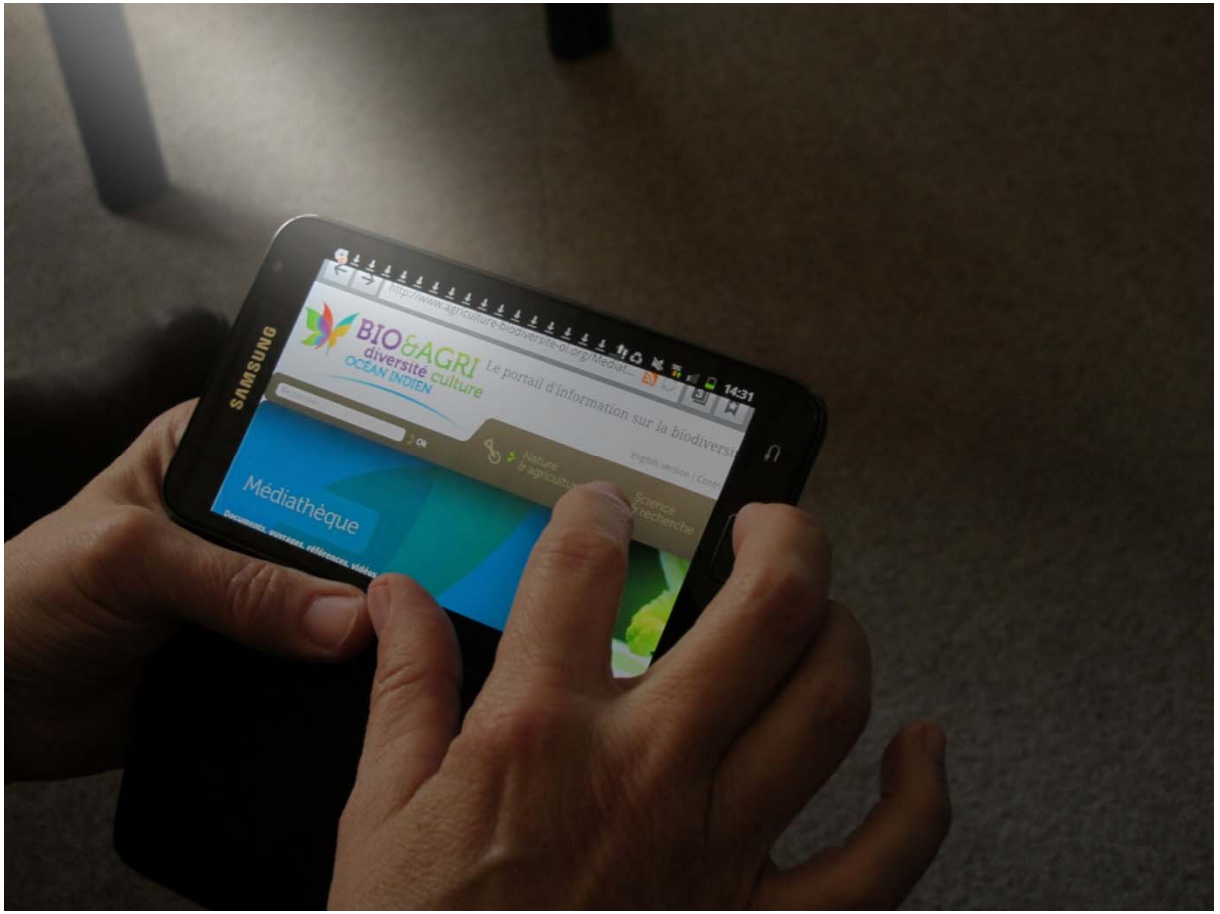
French agricultural research institute paves the way to open access: feedback from CIRAD

Marie-Claude DEBOIN
Cécile FOVET-RABOT
CIRAD, France

cirad

IAALD 2013 World Congress, July 21-24, Ithaca, NY USA

The aim of this presentation is to describe the CIRAD's attempts to make publications accessible through open access



cirad

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The CIRAD is a French state-owned agricultural research centre which works with developing countries

cirad

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The CIRAD's main goal is to support agricultural development to reduce poverty in developing countries

300 out of 800 CIRAD researchers work outside France

cirad

The CIRAD's mandate is to produce quality scientific knowledge and to make it accessible through open access

cirad

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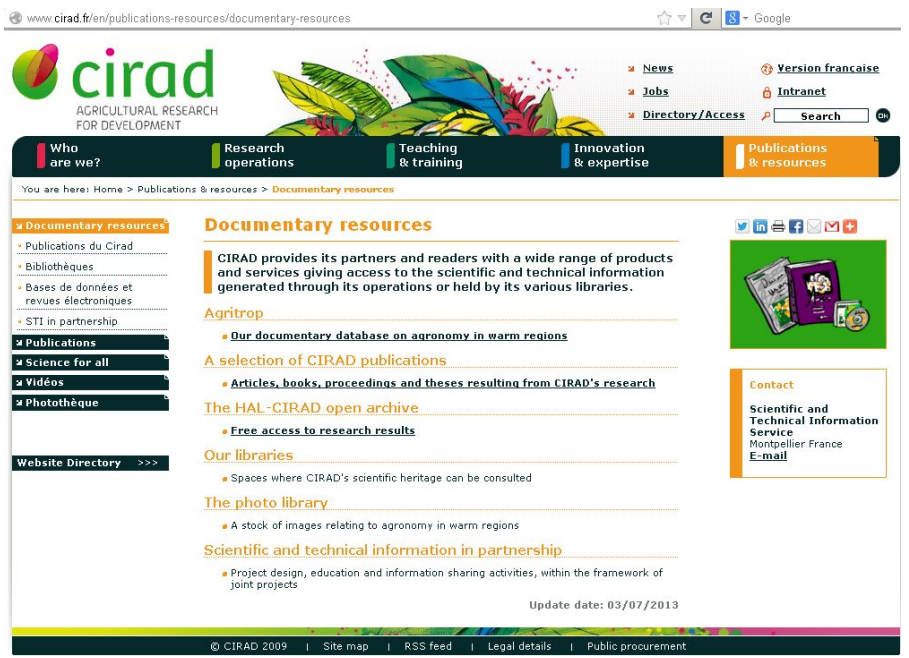
The CIRAD's scientific and technical information (STI) service plays a major role in…

1. training researchers in publishing
2. finding funds for open access
3. making publications accessible
4. devising an information policy



cirad

IAALD 2013 World Congress, July 21-24, Ithaca, NY USA

1. Helping researchers publish in open access journals

Website CoopIST (how to publish)

How to write a scientific paper

How to publish in an open access peer-reviewed journal

How to protect your authors' rights.

Creative Commons Licence (Attribution-NonCommercial-ShareAlike)

http://coop-ist.cirad.fr/

Database *Où publier* (*Where to publish*)

Public journal database to select peer-reviewed journals. Journal aims and scope, impact factor, whether or not it is a full open access journal, whether it ***charges for publication***, and ***which its copyright and self-archiving policy is***.

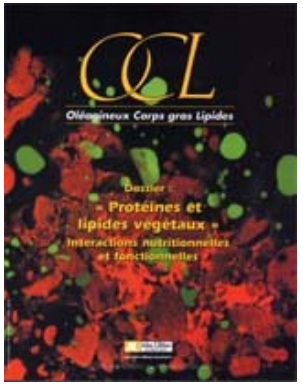
http://ou-publier.cirad.fr/

cirad

2. Identifying sources of funds for open access

3 open access journals:

- **Animal Production and Health**
- **Oilseed Production & Food Processing**
- **Agriculture**



CIRAD has funding from:

- **French National Research Agency**
- **Seventh Framework Plan (FP7)**
- **European Commission**

cirad

3. CIRAD uses dedicated databases to record publications and make them more accessible

Agritrop and CIRAD publications lists

full open access journals

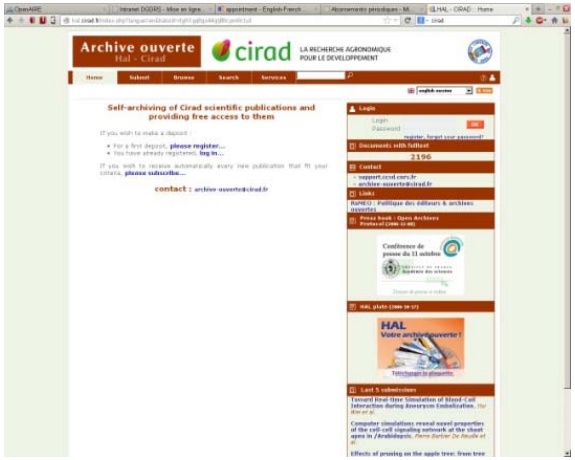
300,000 references and to 14,000 full texts

HAL-CIRAD, a web interface linked

to HAL national French repository

More than 2,000 CIRADfull text documents

accessible through HAL



cirad

Lessons that CIRAD has learned from its experience?

1. Opening up access to institutional publications is a long-term process STI service plays a key role, having the required knowledge, skills and tools **to design, develop and implement an information policy**.

2. A balance must be found between the institutional strategic goals, the means available, and the indicators that measure the progress made.
As an example, from 2009 to 2012, 22.3% of CIRAD articles were published in full open access journals. **CIRAD plans to increase the number of articles published in full open access journals. It will be one of the indicators for its next plan 2013-2016.**

Opening up access to scientific knowledge is a long term process, balancing strategic goals and financial means

Next steps

1. Continu train and provide guidance to Researchers
2. Release an IMARK e-learning course « Writing and publishing a scientific document »

www.imarkgroup.org

3. Make Agritrop compliant with French Repository HAL, European Repository OpenAire, FAO International Database Agris
4. Link publications with CIRAD's research datasets and make them accessible (collect these datasets, organize and describe them, and finally to make them accessible worldwide)

Exploring the relevance of the agro-input dealers suitability for disseminating and communicating soil fertility management practices

Etyang T.B. et al

Introduction

- Lack of access to necessary agro-inputs has been blamed for the low agricultural productivity in most parts of sub Saharan Africa (SSA)
- Despite this importance, the strategic role and position of the agro dealers has not been fully exploited especially in dissemination and communication of the key agricultural development technologies such as Integrated Soil Fertility Management (ISFM)

Introduction ..Contd

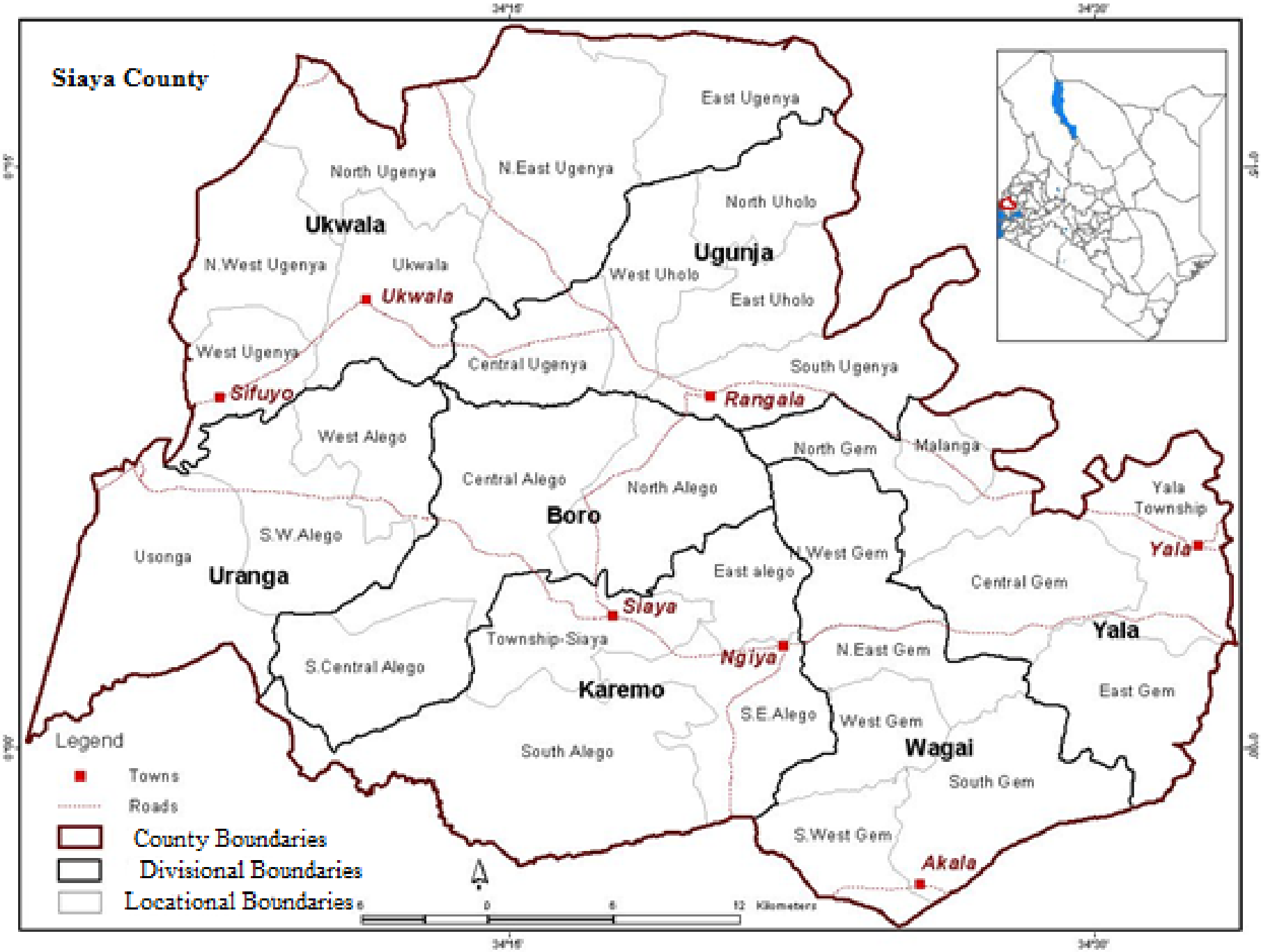
- Agro input dealers make inputs more easily accessible to rural-based smallholder farmers
- Low access to agricultural production inputs coupled with poor knowledge on how to use them by farmers has contributed to low agricultural production & productivity in many African countries including Kenya

Objectives

- To assess the awareness of soil fertility management practices by agro-input dealers
- To investigate the communication channels that agro dealers use to receive agricultural information
- To investigate the support services agro dealers offer to farmers
- To assess agro dealers willingness to pay for the communication tools

Study Area

- Study was undertaken in Siaya and Trans Nzoia Counties in Nyanza and Rift Valley provinces respectively


Siaya County
East Ugenya
North Ugenya
N.East Ugenya
North Uholo
Ukwala
Ugunja
N.West Ugenya
Ukwala
West Uholo
Ukwala
East Uholo
West Ugenya
Central Ugenya
South Ugenya
Sifuyo
Rangala
West Alego
North Gem
Malanga
Central Alego
North Alego
Yala Township
Boro
S.W.Alego
Usonga
Yala
Uranga
East alego
N.West Gem
Central Gem
Siaya
Township-Siaya
Yala
Ngiya
N.East Gem
S.Central Alego
Karemo
East Gem
S.E.Alego
West Gem
South Alego
Wagai
South Gem
S.West Gem
Akala
Legend
Towns
Roads
County Boundaries
Divisional Boundaries
Locational Boundaries
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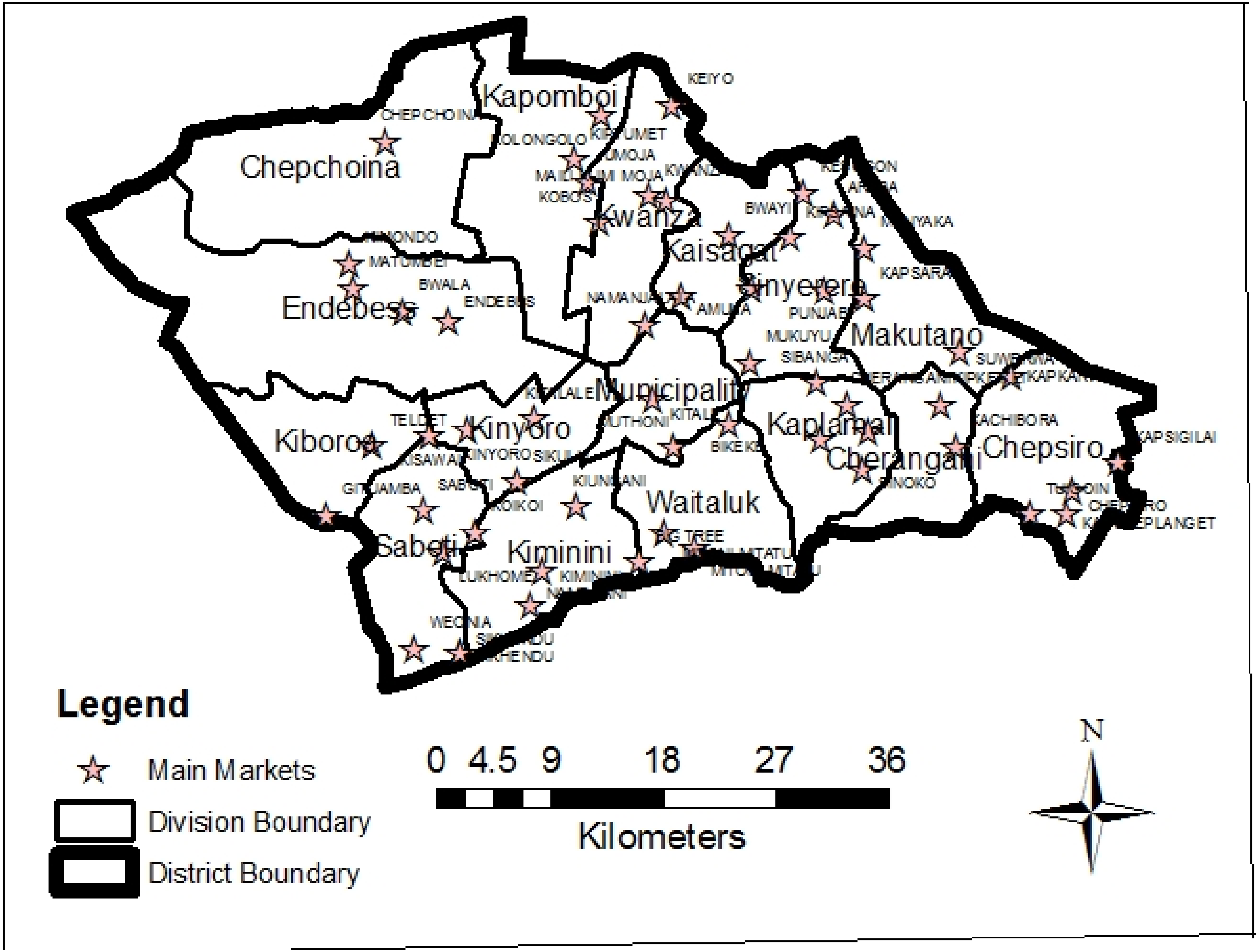
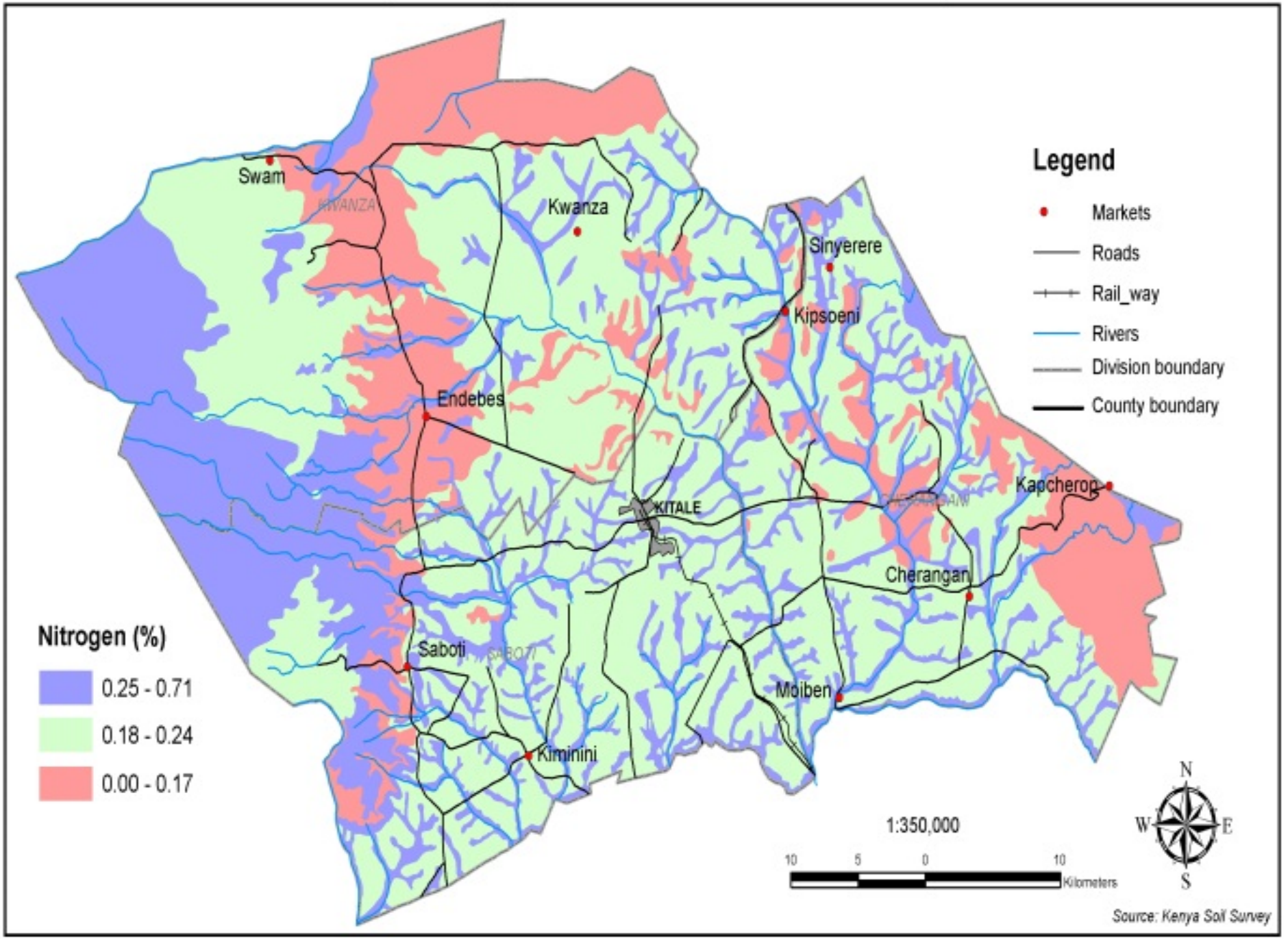

Chepchoina
Kapomboi
Kwanza
Kaisagat
Sinyerere
Makutano
Endebess
Municipality
Kiboroa
Kinyoro
Kaplamai
Cherangani
Chepsiro
Waitaluk
Saboti
Kiminini
KEIYO
MATUMBEI
BWALA
KAPSARA
BWAYI
SIBANGA
KACHIBORA
KAPSIGILAI
KIUNGANI
SABOTI
KOIKOI
BIG TREE
SINOKO
WEONIA
Legend
Main Markets
Division Boundary
District Boundary
0 4.5 9 18 27 36
Kilometers
N

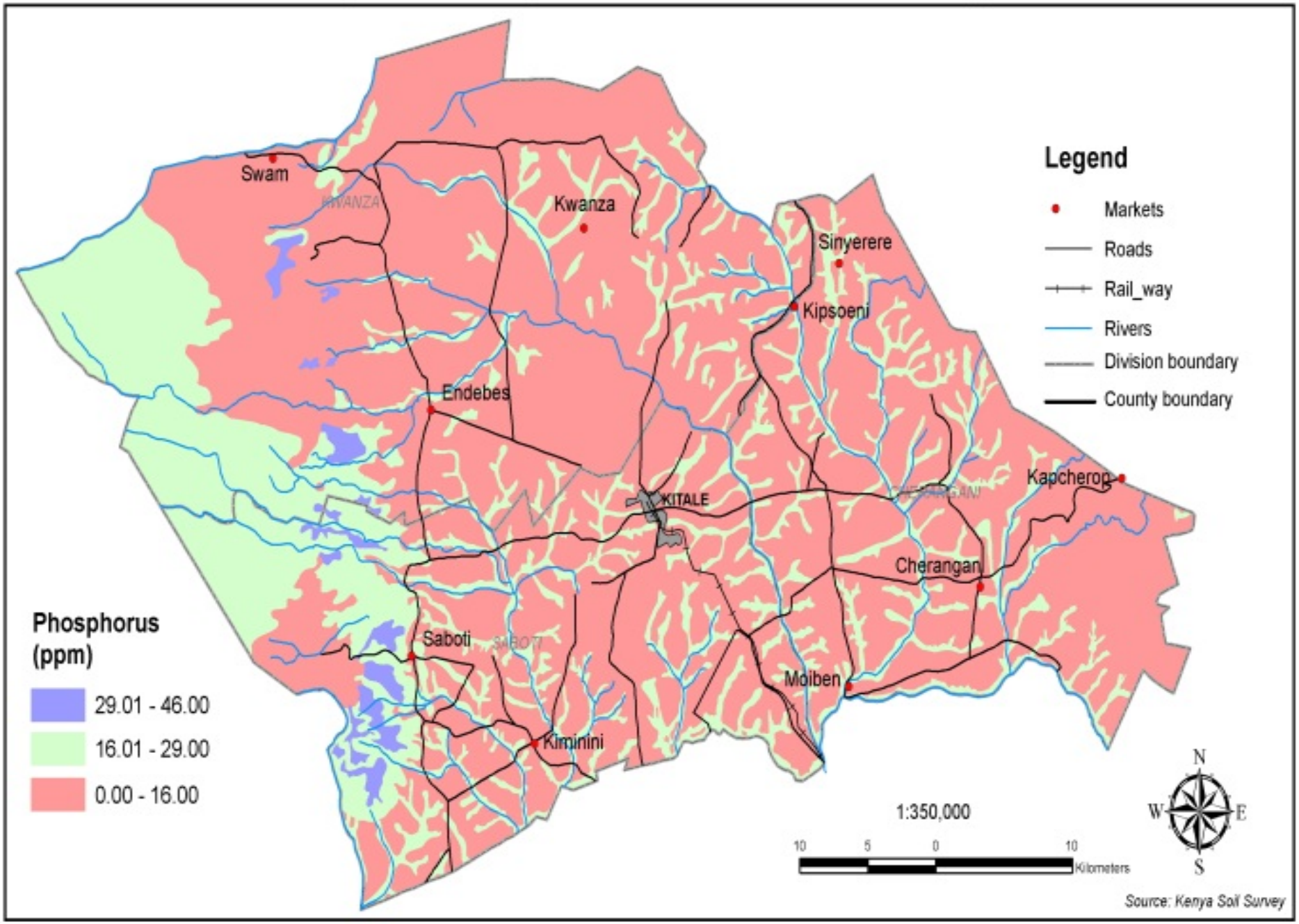
Information resource tools

- Soil map
- Maize doctor

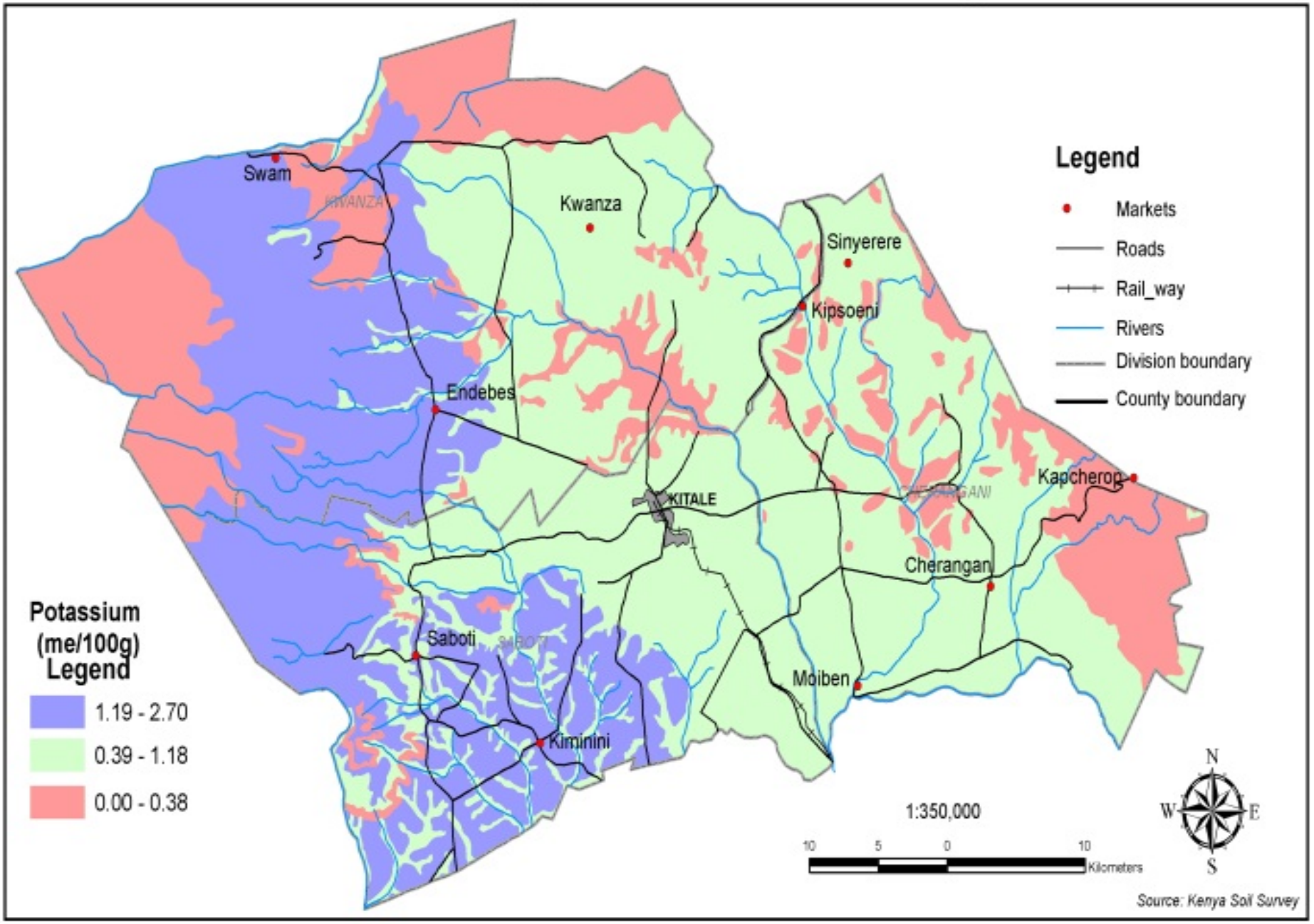
Nitrogen Map of Trans-Nzoia County



Phosphorus Map of Trans-Nzoia County



Potassium Map of Trans-Nzoia County



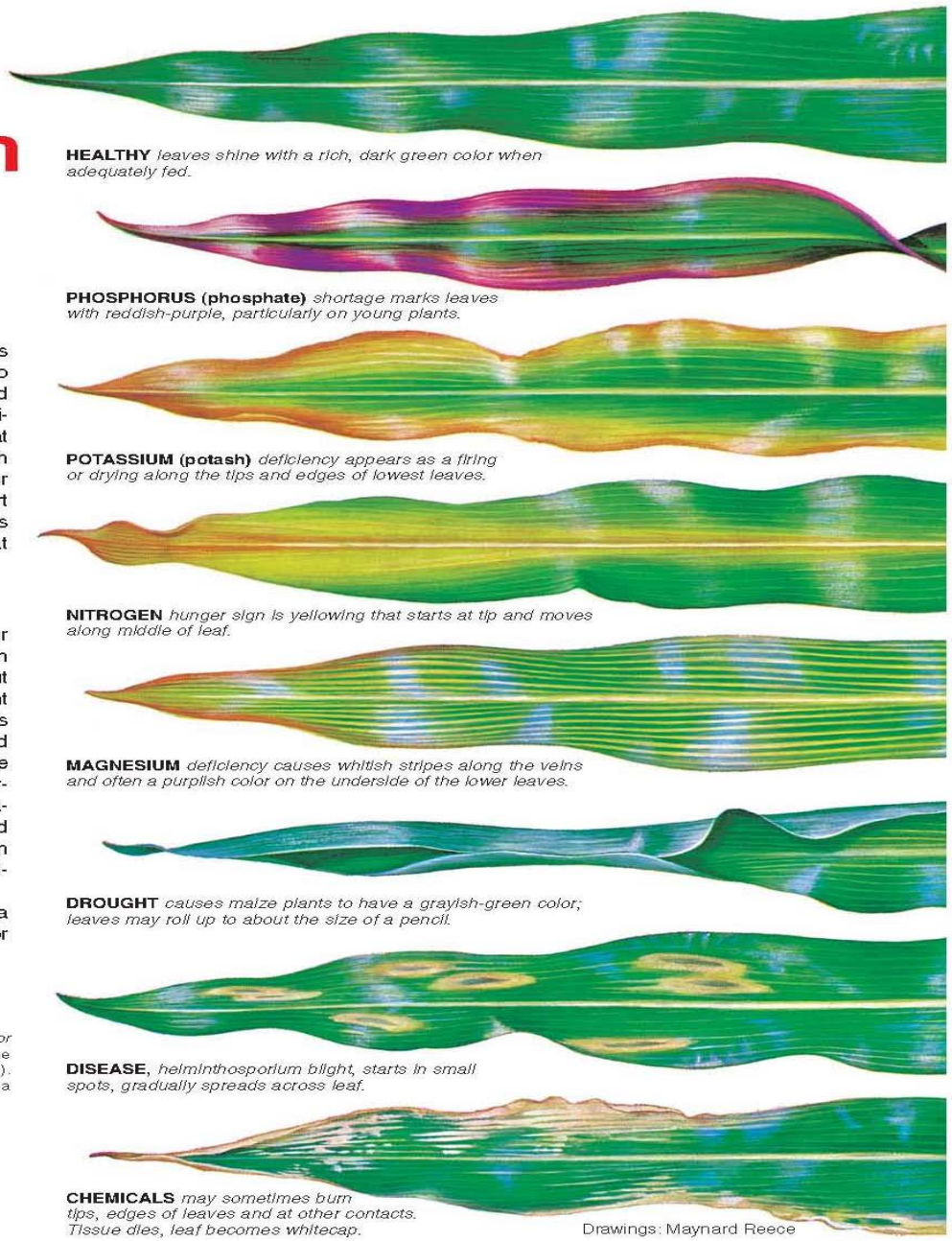
Be Your Own Maize Doctor

HAVE YOU had a "maize check-up" this season? Every grower should learn to recognize the symptoms that are pictured here — signs that a maize crop is deficient in one or more of the nutrients that are essential for healthy plant growth and profitable yields. You can be your own maize doctor. It is an important part of crop management to look at fields regularly and identify signs that problems are developing.

Nutrient DeficiencySymptoms

Optimum economic returns on your crop production investment depend upon an adequate nutrient supply throughout the growing season. These nutrient deficiency symptoms indicate that this need is not being met. Check the field several times during the season. Some deficiencies detected early may be corrected by additional fertilizer applications. Even if they cannot be corrected this year, knowing where they occur can be helpful information in planning fertilizer programs for next season.

Healthy maize leaves should have a rich, dark green color. Any stress or nutrient shortage will alter the color.



HEALTHY *leaves shine with a rich, dark green color when adequately fed.*

PHOSPHORUS (phosphate) *shortage marks leaves with reddish-purple, particularly on young plants.*

POTASSIUM (potash) *deficiency appears as a firing or drying along the tips and edges of lowest leaves.*

NITROGEN *hunger sign is yellowing that starts at tip and moves along middle of leaf.*

MAGNESIUM *deficiency causes whitish stripes along the veins and often a purplish color on the underside of the lower leaves.*

DROUGHT *causes maize plants to have a grayish-green color; leaves may roll up to about the size of a pencil.*

DISEASE, *helminthosporium blight, starts in small spots, gradually spreads across leaf.*

CHEMICALS *may sometimes burn tips, edges of leaves and at other contacts. Tissue dies, leaf becomes whitecap.*

Drawings: Maynard Reece

Additional copies of *Be Your Own Maize Doctor* publication are available for purchase from the International Plant Nutrition Institute (IPNI). Contact Dr. Shamie Zingore, Director, IPNI Africa Program; c/o IFDC
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Telephone: +254 (20) 863-2720
Fax: +254 (20) 863-2029
E-mail: szingore@ipni.net
Website: http://africa.ipni.net

Nitrogen Deficiency

Nitrogen (N) deficiencies are less likely to be detected early in the season, but when young plants are light yellowish-green in color, shortage of N may be responsible. If deficiency is detected early, topdressed N fertilizer may be applied to help correct the problem.

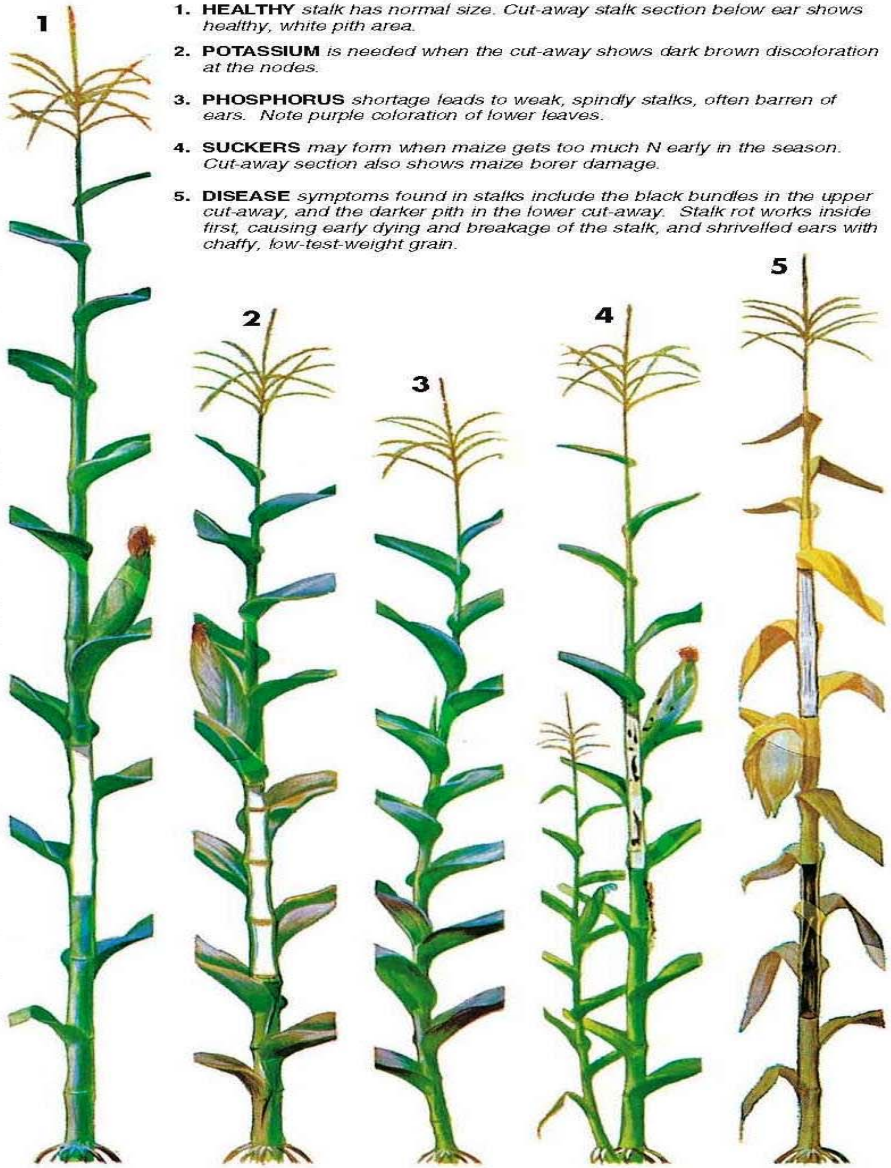
After the maize is about knee-high, growth rate increases, and N demand increases rapidly. If not enough is available, lower leaves begin to turn yellow at the tops, with yellowing progressing along the midrib. Since N is a mobile nutrient in the plant, the symptoms gradually move to leaves higher on the plant. Lower leaves die. Premature death of the plant and small, chaffy ears result from N deficiency.

Phosphorus Deficiency

Phosphorus (P) deficiency usually appears when plants are very young. An early symptom is reddish-purple coloration of the leaves. Weak, spindly stalks — either barren or with small, twisted ears — are also an indication of P deficiency. Cool temperatures and excessively dry or wet conditions early in the season...or any physical restriction to root development...may lead to deficiency symptoms, even if adequate P supplies are in the soil. Phosphorus deficiency will also result in delayed maturity. High rates of uptake per day during rapid growth emphasize the importance of high soil fertility for adequate P nutrition.

Potassium Deficiency

Potassium (K) deficiency shows up initially as a yellowing or browning along the margins of lower leaves, moving gradually toward the midrib, and to leaves higher on the plant. Another common symptom of K deficiency is a dark-brown discoloration of the nodes inside the stalk which may be revealed by slicing the stalk lengthwise. Ear size may not be affected as much as with N or P deficiencies, but tip kernels do not develop and ears may be chaffy as a result of K deficiency. Potassium is also a major factor in water use efficiency, so drought effects are much more pronounced when K supplies are inadequate.

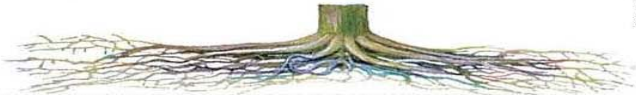


1. **HEALTHY** *stalk has normal size. Cut-away stalk section below ear shows healthy, white pith area.*
2. **POTASSIUM** *is needed when the cut-away shows dark brown discoloration at the nodes.*
3. **PHOSPHORUS** *shortage leads to weak, spindly stalks, often barren of ears. Note purple coloration of lower leaves.*
4. **SUCKERS** *may form when maize gets too much N early in the season. Cut-away section also shows maize borer damage.*
5. **DISEASE** *symptoms found in stalks include the black bundles in the upper cut-away, and the darker pith in the lower cut-away. Stalk rot works inside first, causing early dying and breakage of the stalk, and shrivelled ears with chaffy, low-test-weight grain.*

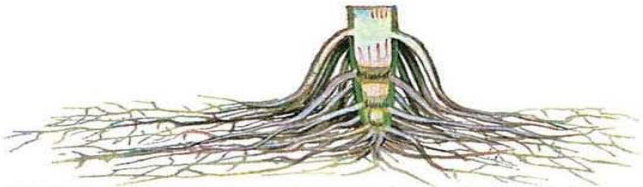
DEEP SPREADING ROOTS *of healthy, high-yielding plants will explore a large area of the soil profile.*

PHOSPHATE *shortage during early weeks causes a shallow root system with little spread.*

ROOTWORMS *prune heavily as they eat small roots and tunnel in larger ones.*



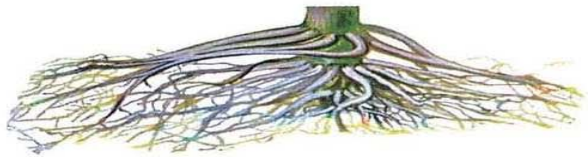
POOR DRAINAGE *and hardpan are causes of a flat, shallow root system. Maize with poor roots can't stand drought and is easily blown over by high winds.*

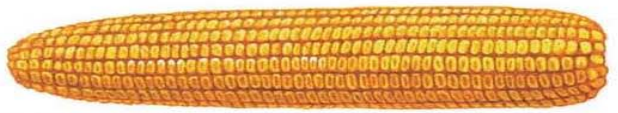


ACID SOIL *is indicated when the lower part of the root is discolored and decayed, particularly when brace roots shoot from third or fourth node.*

▲ **PRUNED ROOTS** *are work of a cultivator. Shovels were too deep and too close.*

CHEMICAL *damage makes roots writhe and twist. Joined brace roots may be another symptom.* ▼





NORMAL EARS, *on well fertilized high-producing maize, often weigh 0.1 – 0.3 kg. Ear tips may not be completely filled with grain.*

BIG EARS, *in excess of 0.3 kg and with kernels covering the tip of the cob, indicate that plant population may be too low for most profitable yields.*

SMALL EARS, *may be a sign of low fertility, excessive population, or other problems.*

POTASSIUM (potash) *shortage shows up in ears with poorly filled tips and loose, chaffy kernels.*

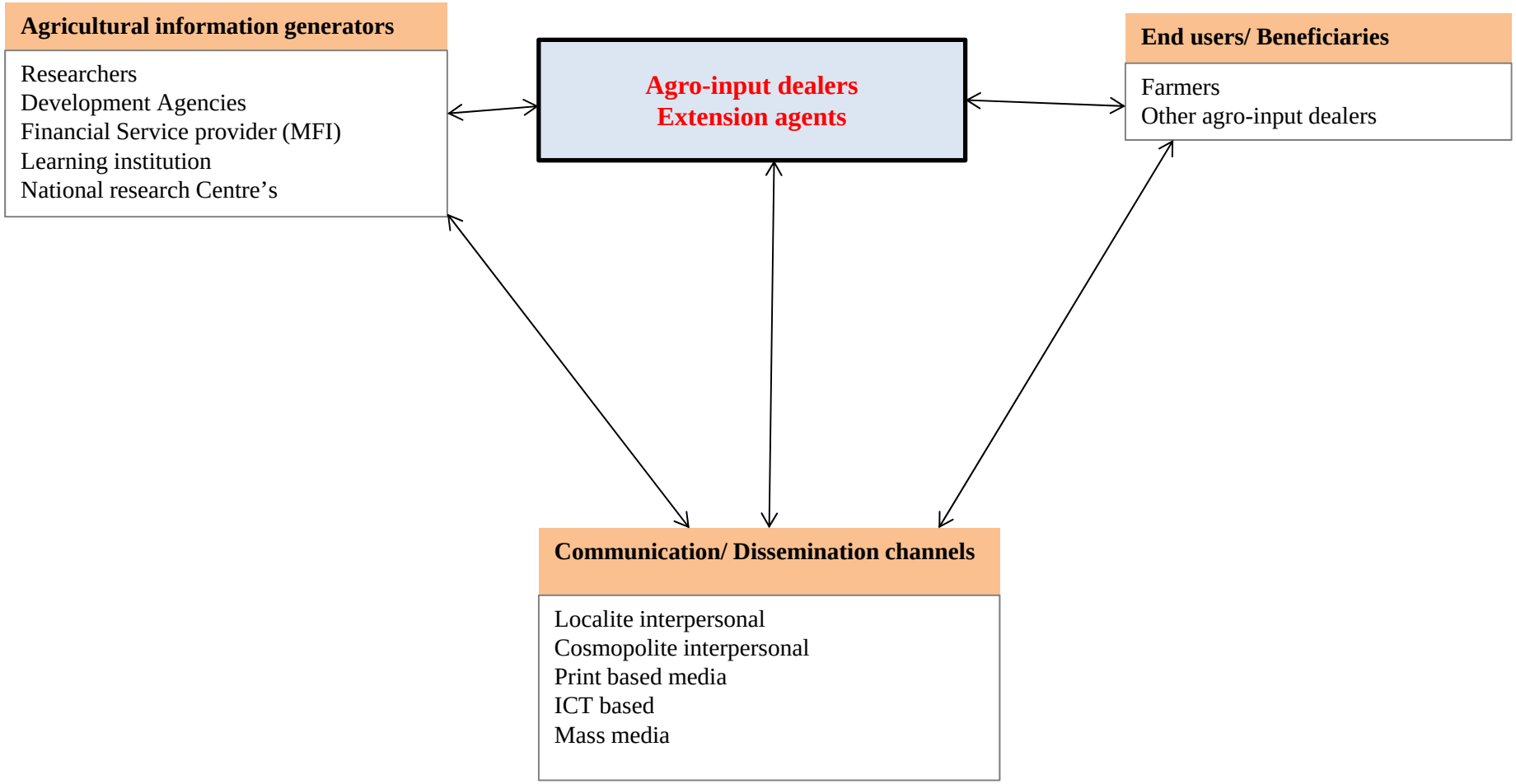
PHOSPHORUS (phosphate) *shortages interfere with pollination and kernel fill. Ears are small, often are twisted and with undeveloped kernels.*

NITROGEN *is essential throughout the growing season. If plant runs out of N at a critical time, ears are small and protein content is low. Kernels at tip do not fill.*

GREEN SILKS *at maturity may be caused by too much N in relation to other nutrients.* ▼

DRY WEATHER *slows silking; kernels aren't well pollinated.*

Conceptual framework



Source: Author; 2013

Sampling and data collection

County	Sampling frame	Sample agro dealers	
		Phase 1	Phase 2
Siaya	148	74	45
Trans-Nzoia	140	70	48
Total	288	144	93

Data analysis

- To address objective 1, a logistic regression was used to evaluate the factors that influence agro-input dealer awareness of various ISFM technologies
- Awareness was defined as whether the agro input dealer was aware of or heard of the various ISFM components such as use of inorganic fertilizers and improved seed varieties among others

- For objective 2, a regression analysis was used to help in identifying factors influencing use of communication channels used by agro-input dealers to receive agricultural information
- Correlation among the communication channels was also generated
- Factor analysis was used to study the relationship among the communication channels

- For objective 3, descriptive statistics of the support services agro-input dealers provided to farmers was generated.
- The number of farmers who benefitted from various support services was examined across gender and the mean number reached in an annual basis determined

- For objective 4, Analysis of Variance (ANOVA) was used to compare the mean prices agro-input dealers were willing to pay (WTP) for the maize doctor and soil map.
- A linear regression model was used to model WTP (Y variable) using several agro-dealer characteristics, e.g. age, level of education, gender, main occupation and county as the X variables

Results

Socio-demographic characteristics of agro-input dealers

		Frequency	Percentage
Gender			
Male		94	65.3
Female		50	34.7
County			
Siaya		73	50.7
Trans Nzoia		71	49.3
Main occupation			
Agro-input dealer		119	82.6
Farmer		19	13.2
Veterinary officer		4	2.8
Teacher		2	1.4
Agro-dealer experience		Gender	
		Male	Female
Age (years)	Minimum	19.0	20.0
	Maximum	68.0	50.0
	Mean	39.2	33.7

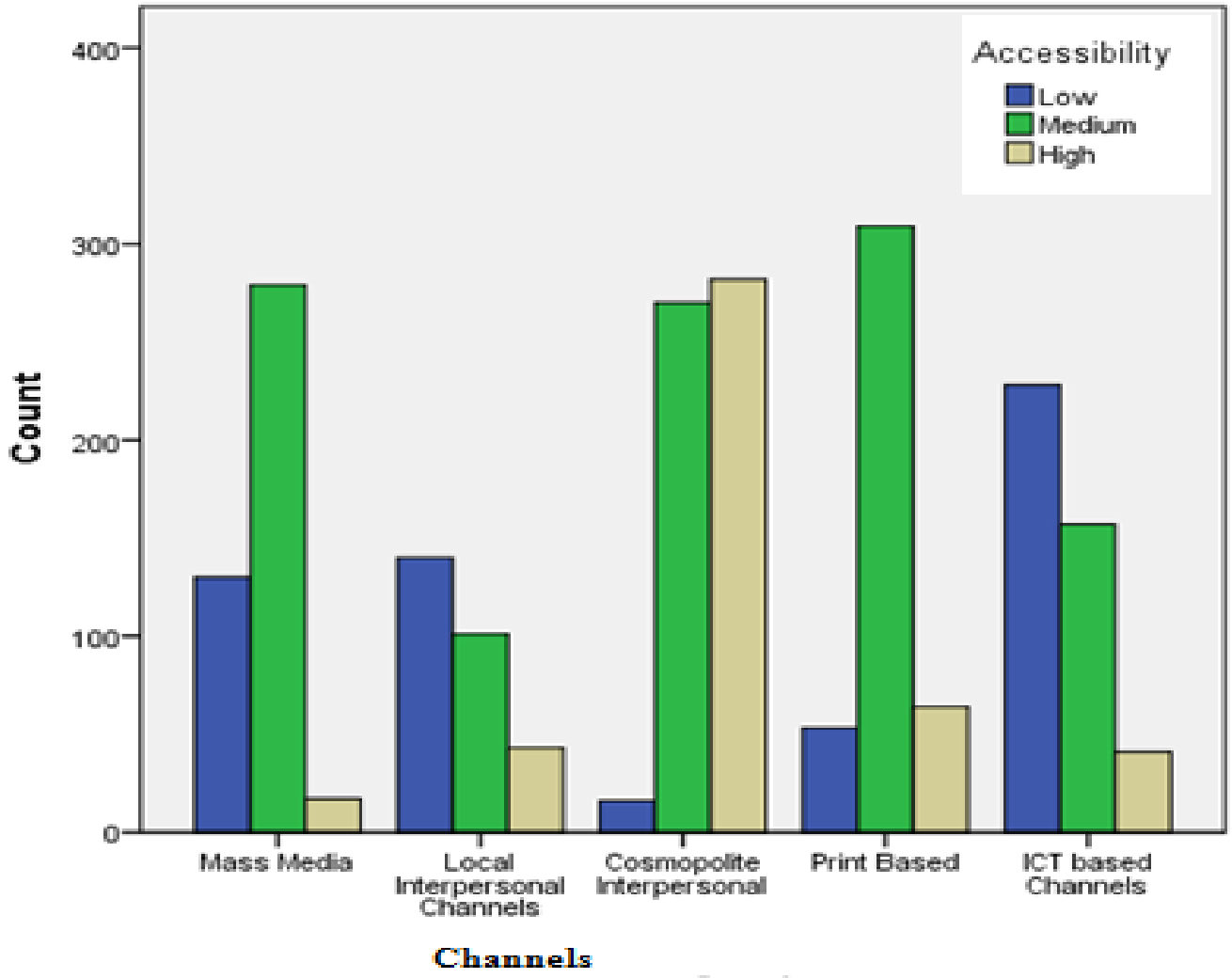
Logit regression of factors influencing awareness of soil fertility management knowledge by agro-dealers

Variables	Co- efficient	S.E.	P -value
Gender of agro dealer	-0.395	0.117	0.001
Age of agro dealer (Years)	0.036	0.007	0.000
Education level of agro dealer	0.906	0.109	0.000
Experience in agri-business	0.076	0.021	0.000
Interaction with extension	0.569	0.264	0.031
Interaction with researchers	0.038	0.23	0.869
Farmer field days/shows	-0.442	0.415	0.287
Providing advice to farmers	0.127	0.287	0.657
Constant	-4.042	0.669	0

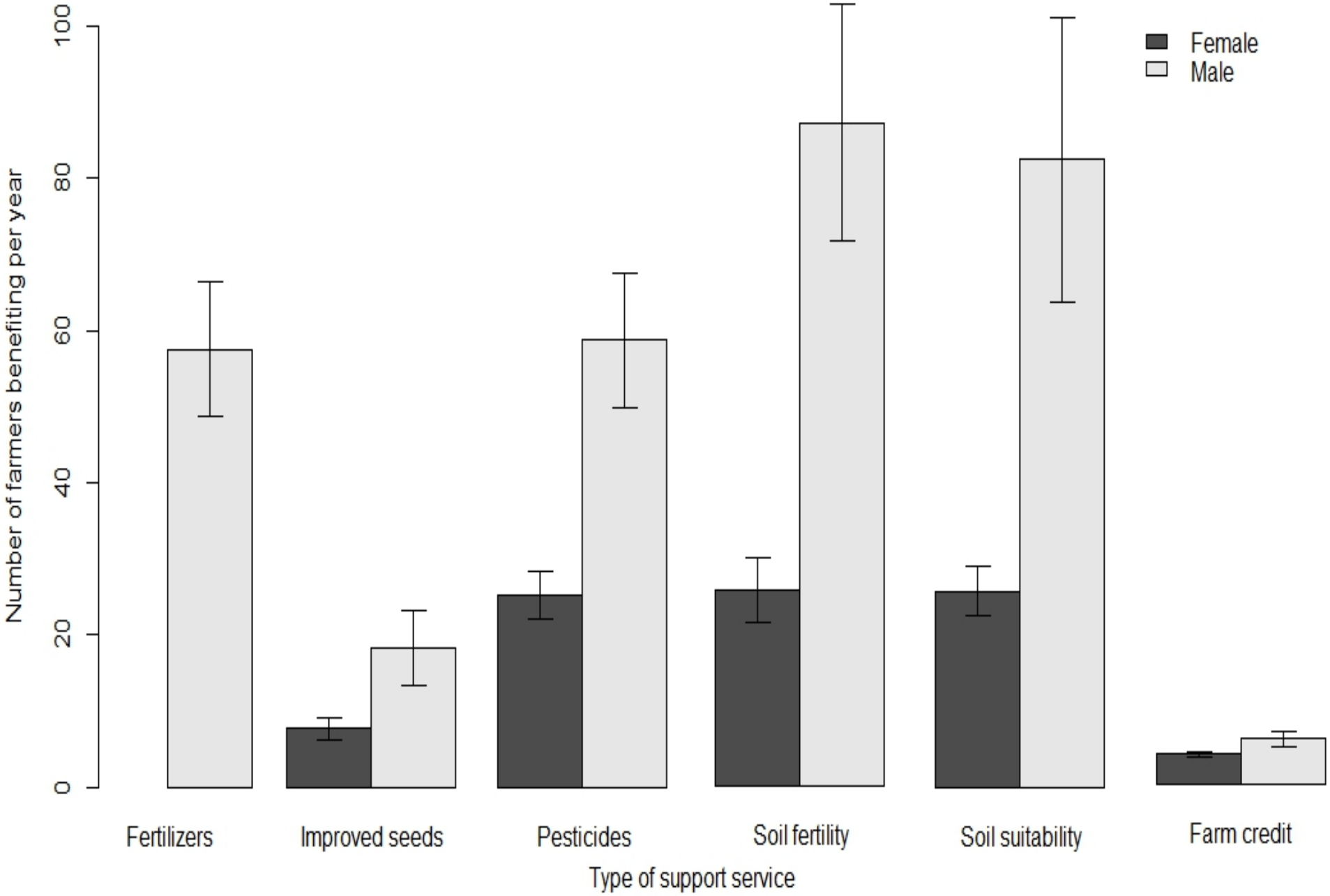
Rotated factor loadings, eigen values and communalities for a seven-factor model of the communication channels agro dealers use to access ISFM information

Accessibility	Component							Communalities
	1	2	3	4	5	6	7	
On farm demon.	0.74							0.72
Workshops /Seminars	0.60							0.53
Brochures	0.57							0.64
Public gatherings	0.56							0.69
Television		0.80						0.67
Radio		0.67						0.69
Internet			0.75					0.61
Books		0.52	0.54					0.76
DVD/ CD players								0.57
Mobile phones				0.91				0.83
Billboards/ Posters					0.74			0.59
Farmer Field Days					-0.53			0.62
Other Agro dealers						0.84		0.76
Newspapers/ Magazines						0.50		0.63
Songs/ Poems/ Skits							0.79	
Eigen values	2.3	2.0	1.3	1.3	1.1	1.1	1.0	
% of Variance	15.02	12.99	8.74	8.38	7.50	7.18	6.70	

Agro-input dealers' assessment of the accessibility of Communication channel



Support services the agro dealers offer farmers by gender



WTP (in Kshs) by agro dealers for the Maize Doctor and Soil Map

Variables	Parameters	Communication tools							
		Maize doctor				Soil map			
		Mean	N	SD	p-Value	Mean	N	SD	p-Value
Gender	Male	192	57	187.3	>0.05	192	57	252.5	>0.05
	Female	135	36	134.1		115	36	179.7	
Education level	Primary	100	2	70.7	>0.05	50	2	0.0	>0.05
	Secondary	167	32	139.7		116	32	170.3	
	Post-Secondary	175	59	187.6		191	58	255.6	
County	Siaya	220	45	193.3	0.005	112	45	151.0	0.041
	Trans Nzoia	124	48	130.6		209	48	277.1	
Main occupation	Agro dealer	167	82	170.3	>0.05	137	82	174.4	0.006
	Farmer	174	9	153.7		310	9	418.8	
	Veterinarian	275	2	318.2		525	2	671.8	
Interactions with extension	No	136	9	167.7	>0.05	167	9	314.3	0.011
	Yes	174	84	171.0		161	84	220.6	
Interaction with research	No	72	11	87.5	0.040	150	11	283.7	>0.05
	Yes	184	82	174.5		163	82	222.9	

Summary, Discussion and Conclusion

- Majority of the agro dealers interviewed were male and over 57% were aware of ISFM technologies
- Gender, age, educational level, experience in agro business and interaction with extension influenced agro dealers awareness of ISFM technologies where all were significant at $p < 0.05$
- Interaction with researchers, attending farmer field days and involvement in farmer education were found to have no influence on the ISFM awareness

- Agro dealers' age, gender, level of education, experience in agro business and interaction with extension staff are important factors that should inform policies needed to enhance the agro-dealer system develop in Kenya
- The findings of this study suggest the need to improve the provision of extension services to agro dealers to enable them effectively communicate information about ISFM technologies to farmers.
- There is need for investing more resources to the strengthening of extension outreach to agro dealers and their interaction with researchers

- On farm demonstration, workshops/seminars, brochures and public gatherings were found to be more accessible compared to other channels of communication
- Other agro dealers, newspapers/ magazines, songs and poems were the least used channels by agro dealers to access and share agricultural information
- ICT based communication channels (DVD/CD players, mobile phones and internet) showed minimal advantage to agro dealers which can be due to the complex nature of use and comparatively high cost of accessing them

- There is need to enhance community based approaches of communication in agro dealer system
- On farm demonstration, farmer field days, workshops/seminars and public gatherings should continue to be promoted
- There is need for investment in ICTs to complement community-based channels for faster and more efficient agricultural information delivery

- Apart from selling inputs, the interviewed agro input dealers also provided additional support services to farmers.
- The three most important services provided to farmers were information on agronomic practices for seeds, pesticides and fertilizers
  - There was general limitation in capacity of the agro dealers especially when it came to providing credit facilities to farmers thus the need for enhancing agro dealers access to credit facilities
  - The study also suggested the need for targeted intervention to build capacity of female agro-dealers to communicate ISFM practices to farmers

- The WTP for the communication tools was found to be influenced by agro dealers' county, main occupation, interaction with extension and researchers
- Agro input dealers were willing to pay for the communication tools as long as they are trained and provided with information on the use of the tools
- The communication tools should be developed for different agricultural products to enhance agro dealers capacity in disseminating agricultural information

- The level of education of the agro-input dealer plays a vital role in the agro-input dealer's awareness of the ISFM technologies.
- The period of engagement in agro-input business has an influence on the agro-input dealer's awareness of the ISFM technologies.
- The communicative channels of communication are more effective in accessing and sharing ISFM technologies compared to disseminative channels of communication.
- The gender of the agro input dealer has an influence on the kind of support service that agro-input dealer offers to farmers.
- The level of education of agro-input dealer influences the WTP for the communication tools (Maize doctor and Soil map) by agro-input dealers.
- The gender of agro-input dealers has an influence on WTP for Maize doctor and Soil map by agro-input dealer.

- The potential of agro input dealers in bridging the gap between science and practice is enormous, what is needed is building the necessary platform where the various stakeholders engaged can be able to interact with agro input dealers

Acknowledgements

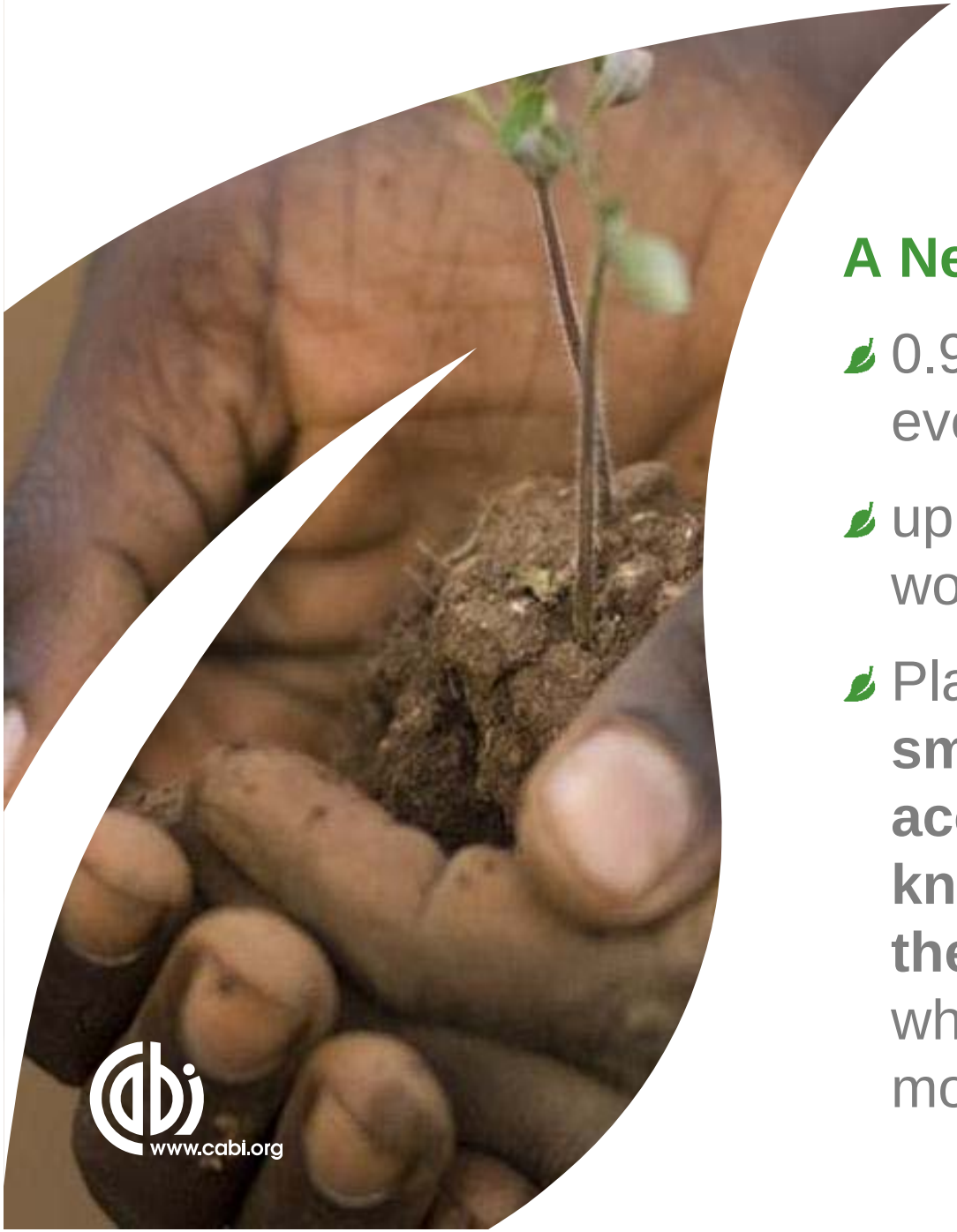
- I would like to thank CTA and Tropical Legumes II project for sponsoring my participation in this conference
- I want to thank the AfSIS project specifically objective 5 and IPNI-Africa for sponsoring my research work
- The university of Nairobi, my supervisors for monitoring my progress
- IAALD for giving me this chance to share my thoughts

Plantwise Knowledge Bank

Building sustainable data and information processes to support plant clinics in Kenya

Cambria Finegold (CABI, UK)
MaryLucy Oronje (CABI, Kenya)
Margo Leach (CABI Associate)
Teresia Karanja (Kenya Ministry of Agriculture)
Florence Chege (CABI, Kenya)
Shaun Hobbs (CABI, UK)

LOSE LESS, FEED MORE
www.plantwise.org



plantwise

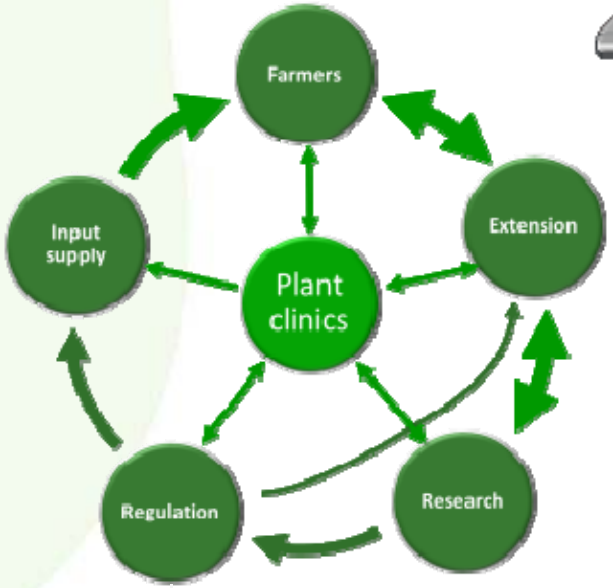
A Need for Plantwise

- 0.9 billion people go hungry every day
- up to 40% of the food grown worldwide is lost to plant pests
- Plantwise **supports smallholder farmers with accessible, practical knowledge, so they can help themselves** to lose less of what they grow and provide more food for their families.

The Plantwise Programme

Plant Clinics

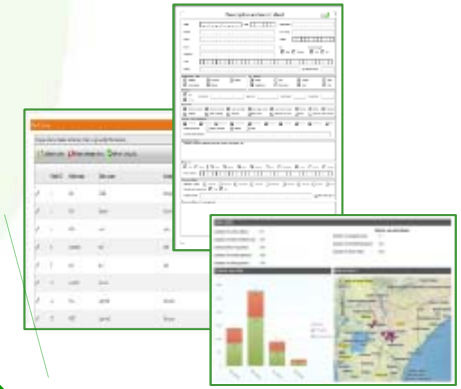
Knowledge Bank



Well-integrated Plant Health Systems

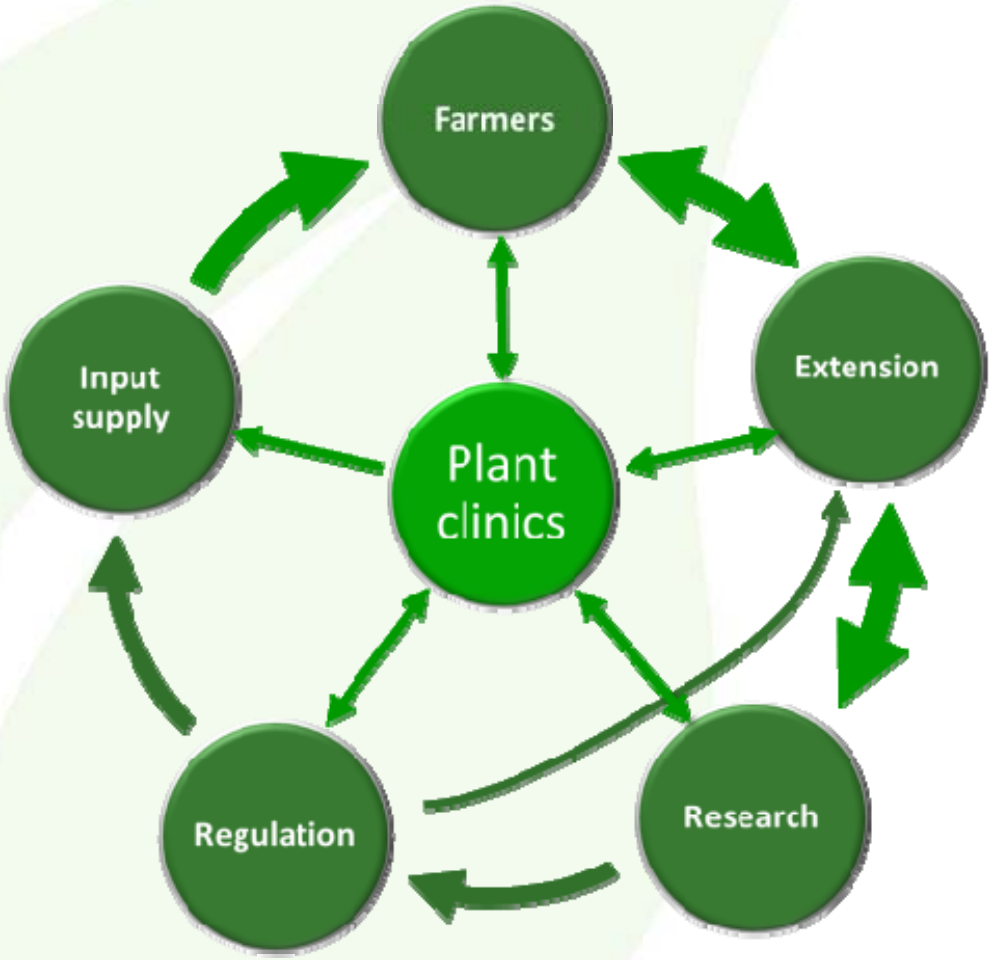
The Plantwise Programme

Plant Clinics



Knowledge Bank

The Plantwise Programme



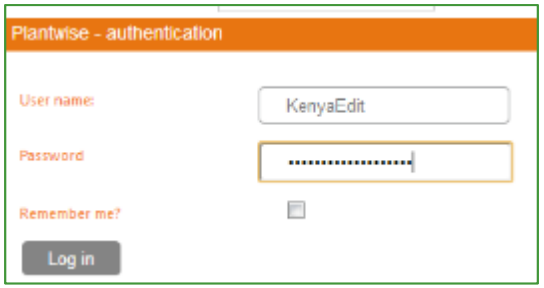
Managing and sharing data and information is key to strengthening Plant Health Systems!!

Data management

- Highly sensitive data
- Building trust and partnerships

Plantwise policies

Data agreements

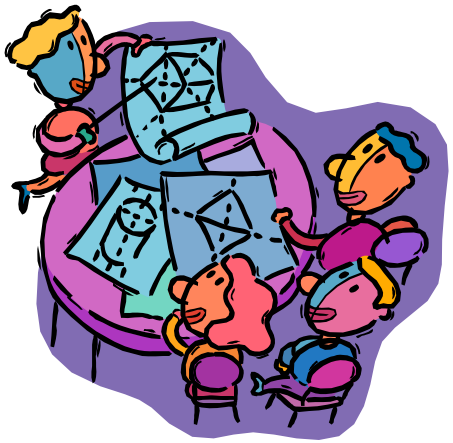


Secure systems

Data management

Connectivity/
Infrastructure

Variable local
capacity



Coordination

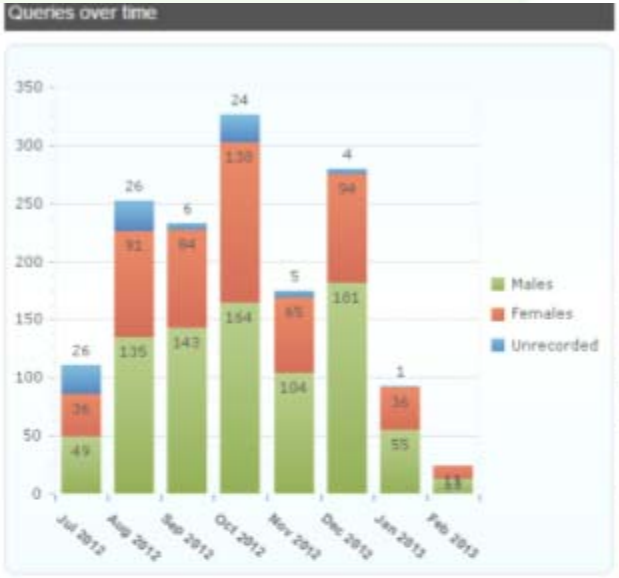
Incentives

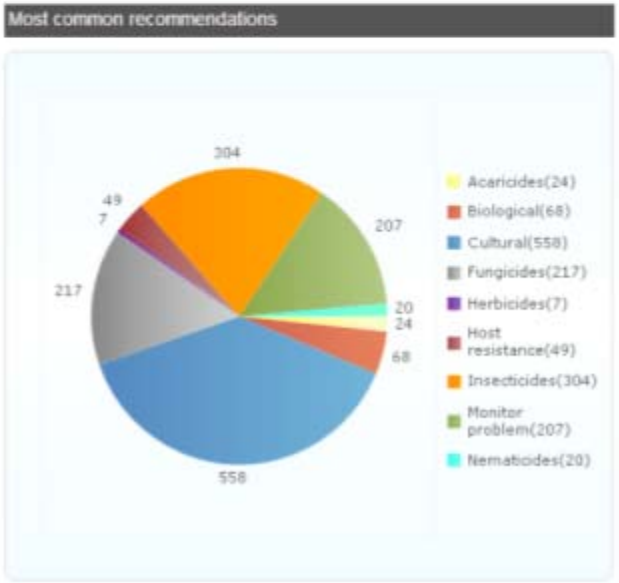
Troubleshooting

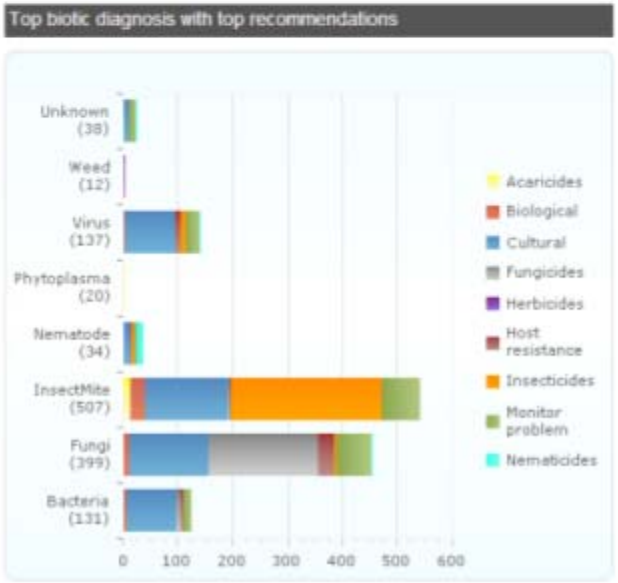
In-country resources

Best path for
country?

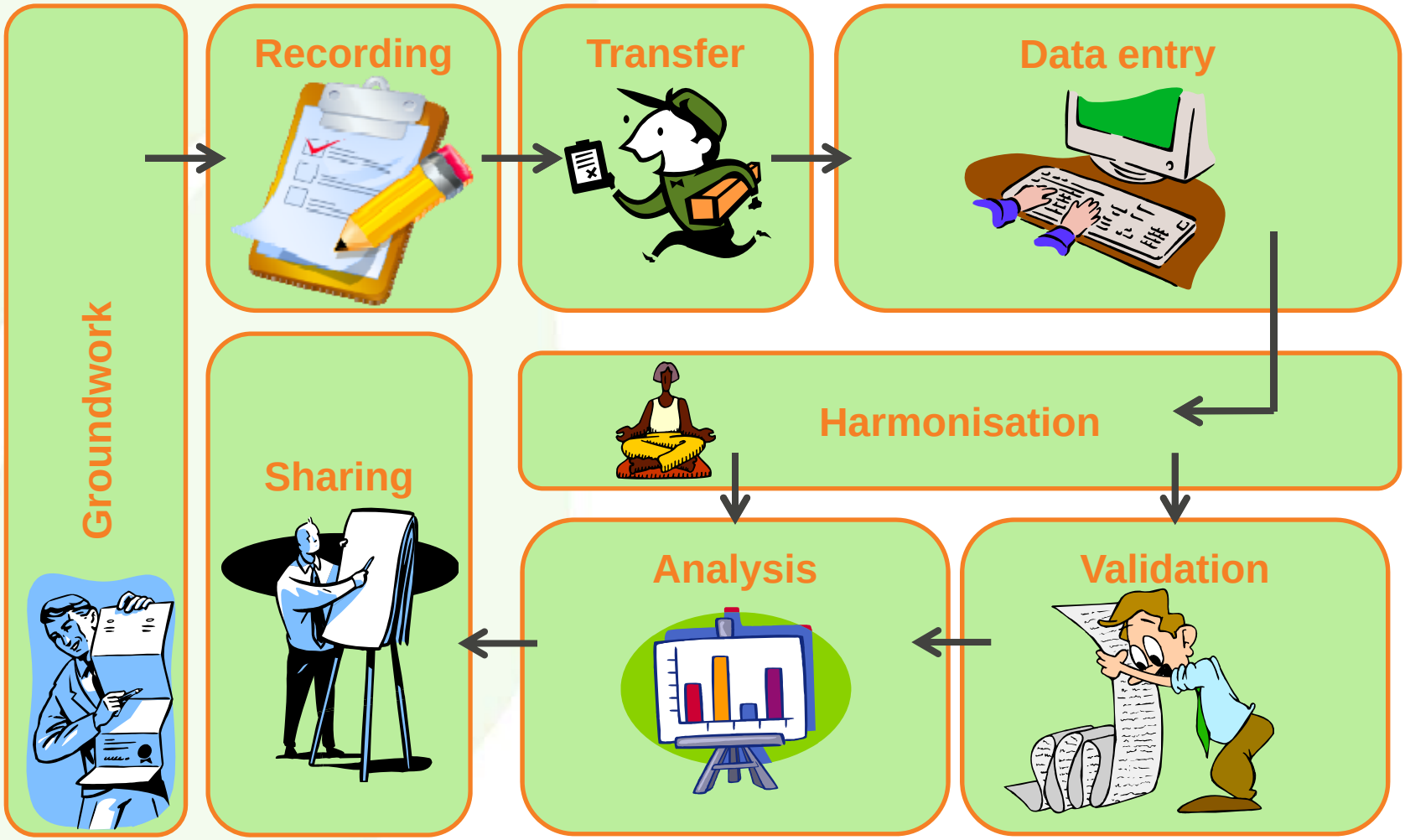
Data itself as an incentive







Data collection and processing workflow



Ministry of Agriculture

Kenya trial

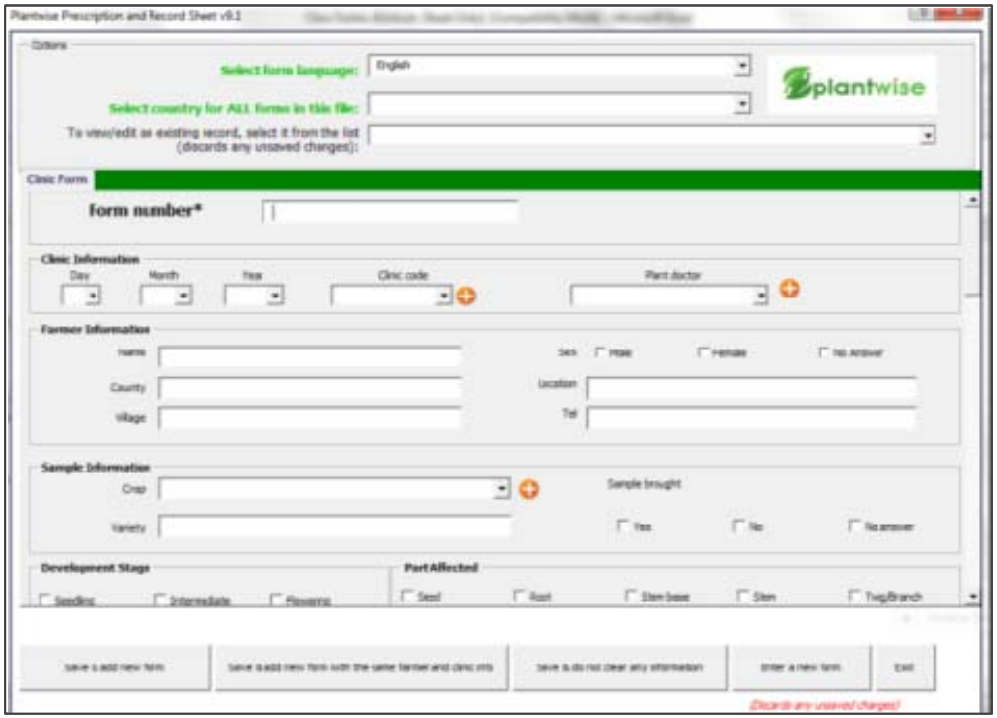
- Test end-to-end solution in practice
- Close partnership with Ministry of Agriculture
  - Data agreement
  - National Data Manager
- Worked closely with National Data Manager to design and test locally-appropriate systems

Kenya pilot

- 35 clinics, organised around 15 district ‘hubs’
- Work with MoA to analyse each stage of workflow and decide:
  - What to do
  - How to do it
  - Who would do it
  - Where it would be done
  - Resources needed

Kenya pilots

5 districts



10 districts

Kenya pilots
Key results

- No data submitted via scanning
- All hubs could transfer data via courier
- >400 records processed in the 3 month trial
- Manual data entry manageable
- KB seen as a valuable tool for data management and sharing
- It is hard work to get data flowing – BUT WORTH IT!

Lessons learned

- Begin discussing data from the start
- Can be a highly sensitive area, especially if trade might be impacted
- Incentives are key – the data itself can be a good incentive
- Work with partners to ensure systems meet local needs

Next steps

- Lessons from Kenya experience used to scale out to other countries
- Kenyan government excited about data – moving on to validation, analysis & sharing
- Data management training for CABI staff and partners
- Now have almost 12,000 records from 12 countries in the database, and growing!

Lose less, feed more

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Plantwise Knowledge Bank
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INFORMATION MANAGEMENT IN FAP VALUE CHAINS PROGRAM, FAMILY AGRICULTURE PLAN (FAP) OF EL SALVADOR

CINDY HERNANDEZ,
KNOWLEDGE MANAGEMENT AND COMMUNICATIONS SPECIALIST
IICA OFFICE IN EL SALVADOR

PLAN DE AGRICULTURA FAMILIAR

¡Juntos podemos!

…THIS IS ABOUT:

- **IDEAS**
- **SOLUTIONS**
- **CREATIVITY**
- **LOW COST STRATEGY**
- **MANAGEMENT**

LINKED WITH SOME OF THE KEY TOPICS OF THIS CONGRESS: INFORMATION, COMMUNICATION, INNOVATION

PLAN DE AGRICULTURA FAMILIAR

LET´S BEGIN AT THE END…

MAIN LESSONS LEARNED IN THIS EXPERIENCE:

ANY AGRICULTURAL PROGRAM OR PROJECT, HOWEVER SMALL, MUST CONTAIN IN ITS PLANNING AND STRUCTURING A COMMUNICATIONS COMPONENT.

AN ADEQUATE BUDGET IS NECESSARY TO SATISFY THE EXPECTATIONS THROUGHOUT THE PROCESS, PARTICULARLY ASSOCIATED WITH PROJECTION AND POSITIONING IN TERMS OF IMAGE

PLAN DE AGRICULTURA FAMILIAR

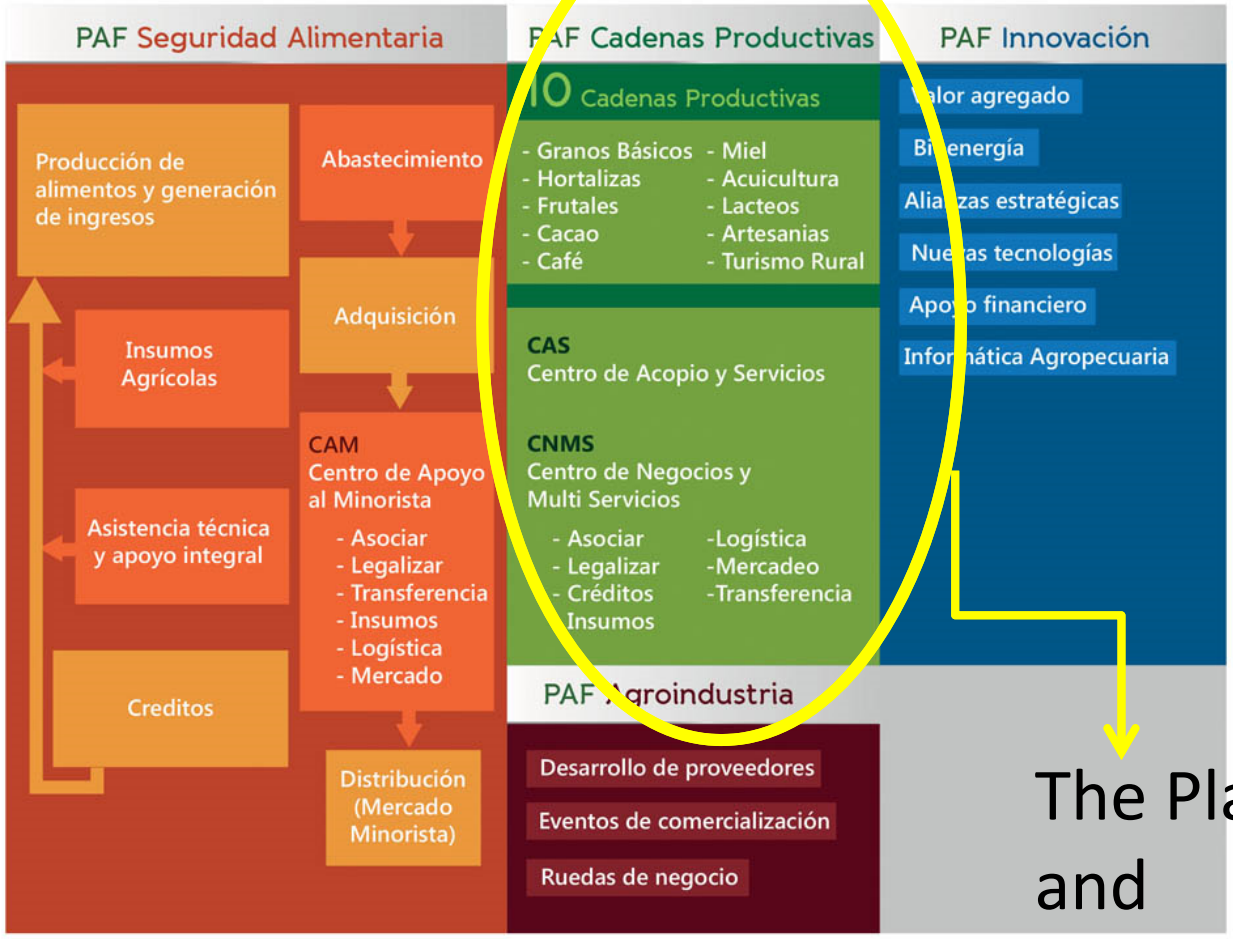
WHAT DID WE DO IN FAMILY AGRICULTURE PLAN OF EL SALVADOR ???

WHAT IS IICA?

WE ARE THE SPECIALIZED AGENCY OF THE INTER-AMERICAN SYSTEM FOR THE PROMOTION OF AGRICULTURE AND RURAL WELL-BEING, AND OUR EFFORTS ARE FULLY FOCUSED ON MAKING **AGRICULTURE COMPETITIVE AND SUSTAINABLE IN THE AMERICAS.**

IN THIS CASE, WE WERE CO EXECUTOR IN FAP VALUE CHAIN PROGRAM

Esquema del Plan de Agricultura Familiar



The Plan and the Program

Communication experience

¡Juntos podemos!

IICA´S OFFICE IN EL SALVADOR CO EXECUTING THE FAP VALUE CHAINS PROGRAM (PUBLIC FUNDS) ESTABLISHED A COMMUNICATION UNIT (PART OF THE MULTIDICIPLINARY SUPPORT TEAM), MANAGED BY A LOCAL PERSONNEL

- ✓ HUMAN RESOURCES AND MODERN EQUIPMENT

THE CREW

THREE PRIORITIES

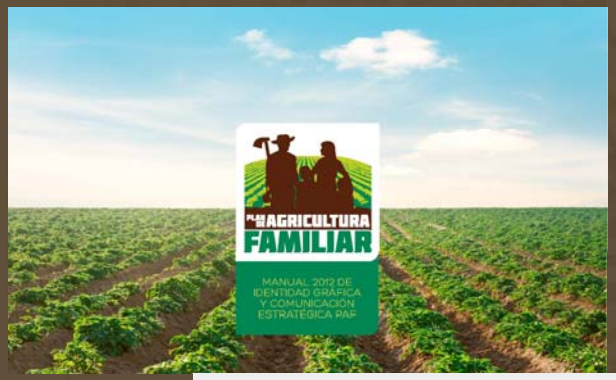
THINKING ABOUT THE BRAND AND ITS POWER…

PLAN DE AGRICULTURA FAMILIAR

I. GRAPHIC IDENTITY CONSTRUCTION

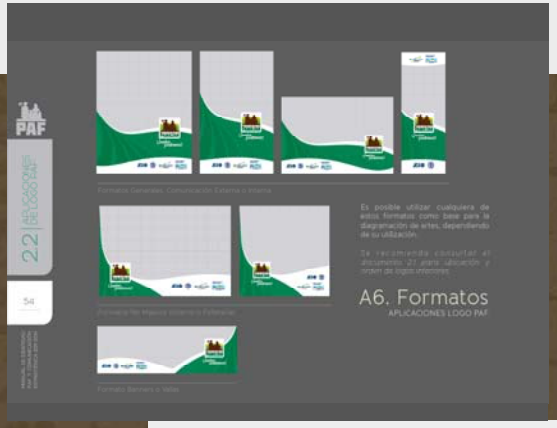
- FAMILY AGRICULTURE PLAN (FAP) AND ITS 4 PROGRAMS HAVE PERSONALITIES
- IT CREATED A STANDARDIZED GRAPHIC LINE, THROUGH A BRANDING EXERCISE
- BUILT BRAND SUPPORT

RESULT: GRAPHIC IDENTITY MANUAL AND STRATEGIC COMMUNICATION


PLAN DE AGRICULTURA FAMILIAR
MANUAL 2012 DE IDENTIDAD GRÁFICA Y COMUNICACIÓN ESTRATÉGICA PAF


PAF
2.1 MANUAL DE USO DE LOGO PAF
46
MANUAL DE IDENTIDAD PAF Y COMUNICACIÓN ESTRATÉGICA 2011-2014
Como se muestra en el ejemplo, se busca no competir con el logo del PAF, sino ser un complemento dentro de la línea gráfica, sumando a su comunicación.
D2b. Iconos Cadenas
ICONOGRAFÍA PAF
PAF
CADENAS PRODUCTIVAS
¡Juntos podemos!
GRANOS BÁSICOS
ACUÍCOLA
HORTALIZAS
FRUTAS
LÁCTEOS
TURISMO RURAL
CAFÉ
ARTESANÍAS
CACAO
MIEL
Familia Iconos Cadenas Productivas


PAF
2.1 MANUAL DE USO DE LOGO PAF
32
La versión original del logotipo PAF siempre deberá ser la primera opción de uso. En caso de limitaciones técnicas se permite utilizar las diferentes variaciones, descartándose en el orden aquí presentado:
1. Versión Original.
2. Versión Simplificada 3 tintas.
3. Versión Simplificada 2 y 1 tinta.
La versión simplificada con las siglas PAF, está considerada para espacios reducidos, presencia en documentos, uso oficial interno o incluso para otras aplicaciones como Co-Naming de programas o acciones específicas, sin llegar a abusar de este último punto en una primera etapa para ayudar al posicionamiento del logo versión original.
La versión identificativa o uso en Co-Naming no podrá utilizarse de manera aislada, ni ser protagonista en ningún tipo de comunicación. Siempre deberá estar bajo la sombrilla del logo original PAF.
A7. Variaciones
EL LOGO PAF
PLAN DE AGRICULTURA FAMILIAR
Versión Original
PLAN DE AGRICULTURA FAMILIAR
Versión Horizontal
PAF PAF PAF
Versión Simplificada
CADENAS PRODUCTIVAS
SEGURIDAD ALIMENTARIA
INNOVACIÓN
AGRO INDUSTRIA
Versión Identificativa o uso en Co-Naming


PAF
2.2 EL LOGO PAF
54
Es posible utilizar cualquiera de estos formatos como base para la diagramación de artes, dependiendo de su utilización.
Se recomienda consultar el documento 2.1 para ubicación y orden de logos oficiales.
A6. Formatos
APLICACIONES LOGO PAF


PAF
2.1 MANUAL DE USO DE LOGO PAF
31
Dada la composición del logo, se facilita su utilización sobre fondos de color, texturas, imágenes o ilustraciones.
Es importante recordar que hay que mantener el área de protección libre y usar el menor número de elementos posibles para la simplificación del mensaje.
En el uso de imágenes de fondo se recomienda la utilización de una transparencia para facilitar la legibilidad del logo (ver ejemplos)
A6. Uso en fondos
EL LOGO PAF
Ejemplos


PLAN DE AGRICULTURA FAMILIAR

también aplicable a banners horizontales, cintillos, cierres o incluso aplicaciones web. Fotografía de referencia.

Es posible utilizar el espacio gráfico también para fondos de color, ilustraciones u otros elementos gráficos, dependiendo del objetivo del material.

C2. Banners Horizontales

APLICACIONES LOGO PAF

Identificación de miembros en campo

Los stickers también pueden utilizarse para generar un sentido de pertenencia e inclusión en los beneficiarios.

Identificación Participantes en Cadenas

D4b. Stickers

APLICACIONES LOGO PAF

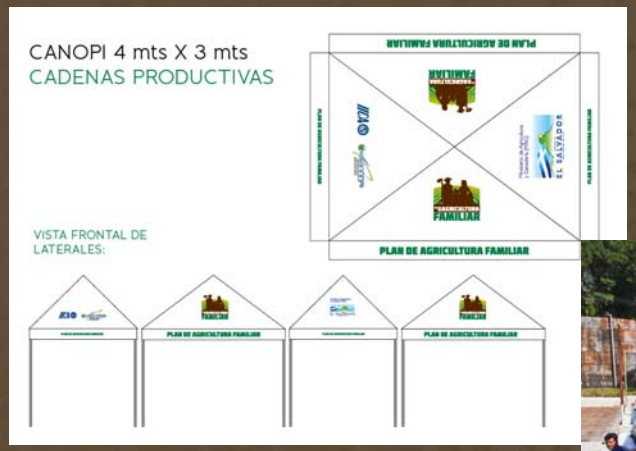
Estos son algunos ejemplos de utilización en portadas para cada una de las cadenas. Las fotografías son solamente referencia. *(Si desea visualizar los íconos de Cadenas, consulte el apartado 2.9.*

B5b. Ejemplos

APLICACIONES LOGO PAF

PLAN DE AGRICULTURA FAMILIAR

PLAN DE AGRICULTURA FAMILIAR



VARIOUS PRODUCTS WERE PRODUCED FROM HANDBOOK GUIDELINES

PLAN DE AGRICULTURA FAMILIAR

THE UNIFORMITY OF A GRAPHIC LINE ENABLED A PAF BRAND RECOGNITION AMONG INTERNAL AND EXTERNAL AUDIENCES

- ✓ **THIS BRANDING WAS SOMETHING NEW FOR THE MINISTRY OF AGRICULTURE, ESPECIALLY FOR A PLAN OR PROGRAM. THEY LEARNED ABOUT THE IMPORTANCE**

II. GENERATING CONTENT

- ❑ MANAGING INFORMATION
- ❑ EDITING AND PUBLISHING

- COLLECT WEEKLY INFORMATION TO GENERATE AND RELEASE NEWS AND STORIES (PRESS RELEASE, ENEWSLETTER AND WEBSITE)

- EDIT TECHNICAL AND INFORMATIVE MATERIALS (INCLUDING POPULAR VERSION ABOUT THE ESSENCE OF THE TECHNICAL MODEL)

II. GENERATING CONTENT

- ❑ MANAGING INFORMATION
- ❑ EDITING AND PUBLISHING

- PHOTOGRAPHIC RECORD

- DIDACTIC VIDEO ABOUT TECHNICAL MODEL APPLIED

PLAN DE AGRICULTURA FAMILIAR

Este es el boletín del Instituto Interamericano de Cooperación para la Agricultura (IICA), Oficina El Salvador. Para suscribirse envíe mensaje a: cindy.hernandez@iica.int

08 de marzo de 2013 | No. 119

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IICA AGROACONTECER

Boletín Informativo de IICA Oficina El Salvador

TITULARES

- Hecho en El Salvador para todos: El Modelo Sincrético de Innovación
- Productores comparten innovaciones
- ¿Un agro sin mujeres?
- Todos contra la roya
- Aprender para resolver problemas sobre el arroz

HECHO EN EL SALVADOR PARA TODOS: EL MODELO SINCRÉTICO DE INNOVACIÓN

Ahora, México evalúa retomar el Modelo Sincrético de Innovación aplicado en El Salvador. Moviendo la brújula hacia el sur, la flecha indica visualizar la experiencia de la agricultura familiar, que ha priorizado la seguridad alimentaria y las cadenas agroproductivas.

¿Qué les ha llamado la atención? La fusión e implementación novedosa de metodologías y herramientas que han potenciado la extensión rural y la transferencia de conocimientos

PLAN DE AGRICULTURA FAMILIAR

III. PUBLIC VISIBILITY

- ❑ EVENTS/ACTIVITIES

- ACTIVITIES AND EVENTS WITH INFORMATIVE VALUE
- BUSINESS OUTREACH ACTIVITIES
- BRAND VISIBILITY

PLAN DE AGRICULTURA FAMILIAR

THE RECIPE: SMALL COMMUNICATION TEAM + BRANDING + INFORMATION + VISIBILITY =
APPROPRIATE COMMUNICATIONS SOLUTIONS

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ÍNDICE

CASO ACUÍCULA

Cooperativa Sara y Ana

"Nunca habíamos cosechado 300 quintales de camarón", relata Santos Mauricio Cruz, jefe de producción de la Cooperativa Sara y Ana, del municipio de Jiquilisco, del departamento de Usulután.

El asociado, adscrito al PAF Cadenas Productivas, comenta que los incentivos recibidos consistentes en 400 mil larvas depositadas en un estanque demostrativo y 90 quintales de concentrado han estimulado considerablemente la producción.

Por tanto, con créditos gestionados por ellos mismos están replicando el efecto multiplicador -logrado con los incentivos- en otros estanques, generando un rendimiento de 1,800 libras por hectárea. En el pasado, las 26 hectáreas de la cooperativa solo producían 625 libras por hectárea. Todo el esfuerzo ha sido motivado por la participación en las Escuelas de Campo (ECAS).

Santos Cruz menciona: "Yo soy miembro de las ECAS. Este es el primer paso; viene el segundo paso, mediante los fondos de PRODEMORO del MAG, a través de la formulación de un plan de negocio, nos ha aprobado 44 mil dólares para producir tres mil 500 libras por hectárea", afirma.

El productor acuícola confirma que en las Escuelas de Campo se aprende desde el trabajo en equipo, hasta cuántos camarones por metro cuadrado están produciendo.

La Cooperativa Sara y Ana, a través del PAF Cadenas Productivas, ha incrementado su rendimiento en un 22%, generando ingresos netos de $9,262 dólares, con camarones de 16 gramos de peso. Esta utilidad la percibe la Cooperativa en cada ciclo de producción, que oscila entre los 70 y 90 días.

"Lo que se está haciendo se está realizado de la mejor manera con la ayuda de los técnicos", sentencia Cruz, quien reconoce que esto sucede en tan solo un año y se proyecta en el ¿Qué vendrá después?, cuando comienza a explorar el mercado, ha tenido una primera experiencia en una Rueda de Negocios, y está a las puertas de la comercialización formal.

Además, agrega que "en las ECAS hemos aprendido que aquí en el país se tiene el recurso para poder explotarlo. No ha sucedido antes, porque la gente no está capacitada. Ahora se quiere competir con Honduras que manda el 75%

de camarón a El Salvador, y queremos ponernos a la par de ellos. Con el apoyo que tenemos del equipo PAF MAG/CENDEPESCA y al poner en práctica lo que realmente es el encadenamiento productivo, donde todos ponemos de nuestra parte, sabemos que vamos a lograrlo", puntualiza.

"Yo soy miembro de las ECAS. Este es el primer paso; viene el segundo paso, mediante los fondos de PRODEMORO del MAG, a través de la formulación de un plan de negocio, nos ha aprobado 44 mil dólares para producir tres mil 500 libras por hectárea"

CASO HORTALIZAS

CAS Los Loroqueros

Milton Palacios Aguirre es agricultor del cantón El Porvenir del municipio de San Pedro Masahuat, departamento de La Paz. Ahora cuenta con más dinero en su bolsillo, como él mismo asegura, y esa mejora de ingresos le permite dar empleo a cuatro personas para sacar una producción semanal de 180 libras de loroco. Esta es su historia reciente, desde que se sumó a las Escuelas de Campo del Programa PAF Cadenas Productivas del Plan de Agricultura Familiar (PAF).

"Antes cultivábamos por cultivar, o como decimos nosotros "a lo loco", no teníamos un control a la hora de regar, fertilizar y poner el foliar. Gracias a las Escuelas de Campo y las capacitaciones que nos han dado hemos llevado todo escalonadamente", relata el agricultor de la Cooperativa El Pajaral, quien antes solo obtenía 44 libras de locoro a la semana, las cuales terminaban en manos de un "coyote".

Palacios hasta se ha olvidado de la figura del "coyote"; todo obedece a que su grupo se ha asociado con sus vecinos de la Cooperativa Los Achiotales, en el Centro de Acopio y Servicio (CAS) denominado Los Loroqueros, que comercializa al sector formal. La organización, a través del CAS, les ha permitido manejar volúmenes de producción y ha incrementado su capacidad de negociación, lo cual les ha permitido comercializar con algunas empresas exportadoras como PHANA y TROPICS.

Según el agricultor, los grupos que forman el CAS establecen el precio del producto; surten a un comprador formal y ya han atendido pedidos de 20 mil y 55 mil libras. Entre las dos cooperativas poseen 55 manzanas dedicadas al cultivo de la flor comestible. También, como grupo, compran sus insumos de manera asociada, logrando mejores precios y reduciendo así sus costos de operación.

El impacto en los ingresos, por las 55 manzanas que manejan ambas asociaciones -que aglutinan a unos 39 productores- se estima entre $38,500 a $46,200 dólares anuales. "Nosotros incluso le compramos a personas que no están dentro de la cooperativa. Damos un precio considerado y así acopiamos el loroco de la zona; hay beneficio hasta para otros agricultores", cuenta Milton Palacios.

Actualmente, este productor habla de las bondades y posibilidades del fertirriego con sales minerales, producto de los incentivos aplicados, en una parcela modelo que funciona como Centro de Desarrollo Productivo (CDP), es decir, el sitio desde donde, luego de varias sesiones de Escuelas de Campo (ECAS), Palacios reflexiona sobre el pasado, un pasado donde existían parcelas sucias y descuidadas; así como baja producción. Habla y comenta con propiedad sobre técnicas de caracterización de suelos, análisis de laboratorio, riego por goteo y uso de productos de baja toxicidad para el control de plagas y enfermedades.

El fortalecimiento organizacional de ambas asociaciones ha permitido el acceso a los mercados, mejorar los precios de venta, y la visión de expandirse al mercado internacional a través de la aplicación de técnicas de inocuidad y buenas prácticas de manufactura.

Al retroceder con el pensamiento, observa los cambios del presente para él y su familia, y hasta se admira de haber aprendido buenas prácticas agrícolas, mientras observa a un grupo de su cooperativa embandejar loroco, hasta con una marca, dentro del CAS en plena actividad.

> “Antes cultivábamos por cultivar, o como decimos nosotros “ a lo loco”, no teníamos un control a la hora de regar, fertilizar y poner el foliar. Gracias a las Escuelas de Campo y las capacitaciones que nos han dado hemos llevado todo escalonadamente”

CASO CÁFE

Cooperativas Los Pinos y El Refugio

Las cooperativas Los Pinos y El Refugio, ambas del occidente del país, tienen en común el cultivo de café; pero ahora comparten un esquema asociativo aprendido con el PAF Cadenas Productivas del Plan de Agricultura Familiar. Eso ha permitido una irradiación técnica y de incentivos para casi 250 caficultores.

Con el paso del tiempo, ambas asociaciones que reúnen no menos de 1000 mz de café y producen al año –conjuntamente- unos 21 mil quintales, han visto fluctuar los precios del café. Pese a los altos y bajos, su emprendedurismo se ha mantenido.

Jorge Chacón, presidente de El Refugio, comenta abiertamente que la cooperativa viene de un historial donde no era ni rentable cortar el café y con el paso del tiempo han incursionado en ventas a futuro.

Con el proyecto "Rescate y Desarrollo de la Caficultura Nacional", en el marco de la cadena de café, las cooperativas han recibido como incentivo 140 mil 284 plantas de café que han sido sembradas bajo la modalidad repoblación asistida, lo cual también ha demandado la introducción de innovaciones tecnológicas.

Además, el eje de la intervención ha estado centrado en el incremento de las capacidades y habilidades de los cafetaleros y las organizaciones. Han completado 42 sesiones de Escuelas de Campo (ECAS), con un currículo centrado en aspectos productivos, identificados por los propios protagonistas.

"Desde que nos constituimos como cooperativa, hace más de 30 años, no se nos habían acercado instituciones de gobierno a brindarnos asesoría. Esto ha sido una sorpresa. Estábamos olvidados", recuerda Jorge Chacón, presidente de la Cooperativa El Refugio.

El fomento de una gestión orientada a alcanzar una mayor productividad, calidad y valor agregado del café también ha sido parte del proceso. Los miembros de las cooperativas han descubierto las ventajas de asociarse para formar un Centro de Acopio y Servicios (CAS) y van avanzando en las lecciones de Competencias Económicas basada en la Formación Emprendedora (CEFE).
El enlace de negocios entre ambas cooperativas perfila complementariedades, en el procesamiento y exportación del grano.

"En el CAS, donde estamos trabajando en asociatividad con Los Pinos, nos han enseñado que hay fuentes de mercado internacional donde podemos ser más competitivos con los precios; el uso de la tecnología; que existen certificaciones para posicionarnos mejor; todos son aprendizajes que por primera vez estamos viviendo. Esto nos potencializa un escenario diferente, se nos abre la mente y estamos frente a otros espacios. Es un complemento para ser más visionarios, para aumentar valor agregado" menciona José Balmore Landaverde, vicepresidente de la Cooperativa El Refugio.

Las capacitaciones en el marco del PAF Cadenas Productivas han abierto otras experiencias de aprendizaje para fortalecer los negocios agrícolas que realizan. Algunos de los asociados han conocido de primera mano iniciativas agroturísticas en fincas cafetaleras de Costa Rica, lo cual dibuja nuevas ideas para revalorizar la actividad económica a través de la diversificación y la ampliación de actividades dentro de la cadena, mediante la incorporación de servicios con valor agregado.

"Hemos vivido en un encierro, donde "sálvense quien pueda", a medida que se abren espacios nos damos cuenta que se presentan más alternativas para asociarlas al rubro café. En la historia de la cooperativa, es la primera vez que un representante va a una gira a adquirir conocimientos. Lo vemos como una herramienta de trabajo para los años venideros", detalla Landaverde, al referirse a la gira internacional por Costa Rica.

El perfeccionamiento del capital humano también se reflejará en las tazas de café que degustarán los clientes de la Cooperativa El Refugio. Al agregar un curso de catación y tostado, los beneficiaros aplicarán nuevas destrezas tanto en ese proceso, como en el molido del "grano de oro" y ampliarán la receta hacia el éxito en sabor y calidad. Con el curso, se identifican y determinan las características organolépticas de la producción, a fin de consolidar los mejores sabores y texturas para los clientes.

Otro capítulo, también, se ha iniciado en la historia de la Cooperativa El Refugio. La innovación es el factor que escribe este nuevo episodio donde comenzarán a procesar su producción mediante un beneficio ecológico con

capacidad para 1500 quintales, incentivo otorgado por el proyecto, que establece una nueva modalidad de beneficiado, así como un nuevo modelo de gestión ambiental y presenta otras oportunidades para la comercialización de servicios.

Landaverde recapitula: "Hemos estado aprendiendo sobre cómo podar un árbol de café, cómo podar un árbol de sombra, cómo mantener vivo el ecosistema del país a través del café; otro de los grandes aprendizajes es pensar en variedades de café que sean sostenibles con los cambios climáticos".

Sin duda, la experiencia del café que ofrecen ambas cooperativas ya no será la misma, su sabor se ha enriquecido.

> "Desde que nos constituimos como cooperativa, hace más de 30 años, no se nos habían acercado instituciones de gobierno a brindarnos asesoría. Esto ha sido una sorpresa. Estábamos olvidados"

CASO MIEL

Asociación Cooperativa de Apicultores de La Libertad (ACAPILL de R. L.)

Una lucha de 23 años para lograr exportar miel hace de la Asociación Cooperativa de Apicultores de La Libertad (ACAPILL de R. L.) un caso emblemático y diferente. En los últimos dos años, esta asociación con sede en el municipio de Ciudad Arce, departamento de La Libertad logró el sueño. Ahora, Alemania es el mercado destino de su producto; un mercado altamente exigente en cuanto a: estándares de calidad, tanto a nivel empresarial, como a nivel de confiabilidad, integridad y pureza del producto entregado.

La empresa Deustche Honig Import GmbH & Co. KG, su principal compradora en Alemania, evalúa y clasifica a sus clientes, semestralmente, en tres niveles: A, B y C. Si la empresa proveedora cumple con los criterios arriba mencionados entre un 82 y 100%, se agencia la clasificación A; entre el 65 y 81%, la clasificación B; y por debajo de 64%, la clasificación C.

ACAPILL, según las evaluaciones realizadas por la empresa entre enero y junio de 2012, los cumplió en un 93.30%, lo que inmediatamente le agenció la Clasificación A.

La intervención del equipo de especialistas PAF MAG/CENTA/IICA más la asesoría en Sanidad Agropecuaria e Inocuidad de los Alimentos (SAIA) ha sido fundamental en la superación de no conformidades que impedían –anteriormente- la exportación de miel. "Si no se hubieran superado dichas no conformidades la cooperativa ACAPILL no hubiera exportado un solo contenedor de miel en la temporada 2011-2012", comenta Mario Hidalgo, gerente de ACAPILL.

El equipo técnico fortaleció a miembros de la Asociación en temas de seguridad industrial, manejo higiénico de los alimentos, calibración y uso de instrumentos de medición y adiestramiento en uso de equipos industriales; prácticas sobre inocuidad, buenas prácticas apícolas y comercialización.

En 2011, la Asociación se ubicó en el tercer lugar entre seis exportadores privados. Actualmente, poseen el título de Primer Lugar en Exportación de Miel 2011-2012. Ha generado divisas por un millón 250 mil dólares, donde cada asociado -de los 30 en total- percibe utilidades hasta por 25 mil dólares.

La coordinación y acompañamiento del equipo PAF MAG/CENTA/IICA en cuanto a la búsqueda de un espacio adicional para el almacenamiento de 800 barriles aumentó la capacidad de la cooperativa para adquirir más miel y exportar, con la cual consiguió ubicarse como el líder en exportación. El trabajo del equipo técnico en comercialización para reforzar la logística, buenas prácticas y supervisión de la calidad han sido determinantes en esta historia.

"Nuestra Asociación es un caso exitoso de exportación bajo la modalidad de acopio de la producción de pequeños productores, explica Hidalgo, tanto de los pertenecientes a ACAPILL como de los diseminados en todo el territorio, a quienes compramos su producción a un precio competitivo".

De 23 contenedores que han logrado exportar, seis pertenecen a los apicultores de ACAPILL, quienes poseen más de 7 mil colmenas que se traducen en más de 2,600 quintales de miel. Los 17 contenedores restantes pertenecen a 470 productores diseminados en todo el territorio, cuya producción se traduce en más de 7,000 quintales de miel.

ACAPILL rompe paradigmas. La cooperativa ha demostrado que la exportación no está reservada al sector privado. Una combinación de esfuerzos del Ministerio de Agricultura y Ganadería (MAG), a través del Programa de Reconstrucción y Modernización Rural (PREMODER), en cuanto a la infraestructura y el equipamiento; así como la

formación de capacidades a través de PAF Cadenas Productivas han permitido convertir este caso en algo exitoso.

"Nos han enseñado a pescar. Y se han beneficiado los productores apícolas nacionales, hemos hecho convenios con las Cooperativas de Nueva Concepción, Chalchuapa y Cara Sucia para acopiar miel. Esto demuestra que las cooperativas pueden salir adelante", considera Mario Hidalgo.

> "Nuestra Asociación es un caso exitoso de exportación bajo la modalidad de acopio de la producción de pequeños productores"

CASO FRUTAS

Grupo Agroempresarial Valles Unidos

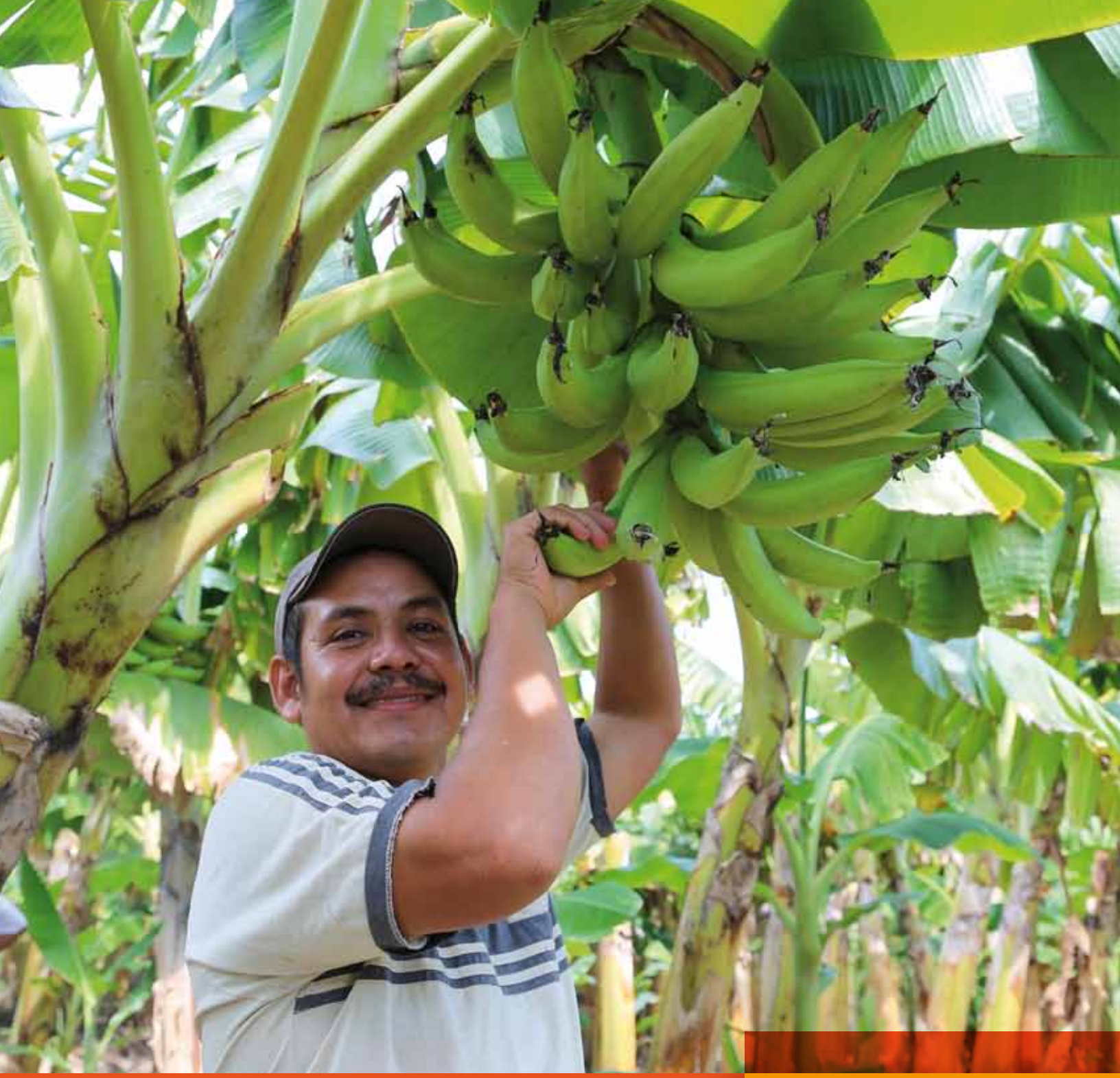
La pregunta ¿Qué nos van a dar?, reflejo del asistencialismo que ha prevalecido en el país, quedó atrás para Leonardo Ramírez, quien junto a otros 29 socios forman el grupo agroempresarial Valles Unidos, de San Francisco Menéndez, Ahuachapán. Sumados a la cadena de frutas del Plan de Agricultura Familiar, Ramírez estima que son la zona de mayor producción de plátano en el país. Haciendo a un lado el escepticismo, porque el Programa PAF Cadenas Productivas no tenía como base otorgar regalías, definieron unirse, aceptar la metodología y mostrarse dispuestos a aprender técnicas nuevas. Actualmente, cultivan 400 manzanas de plátano de forma tecnificada, con siembras escalonadas y riego. En el grupo espera ir migrando paulatinamente hacia 1800 manzanas de cultivo que maneja aún de manera tradicional.

Luego de las Escuelas de Campo, el agroempresario valora cómo la metodología aplicada permite la participación al productor. "Que el agricultor pueda exponer y presentar sus ideas; eso es importante, porque no se llegan a imponer las técnicas, es un trabajo juntos; de alguna manera se valora la experiencia de los productores y al unirlas con las de los técnicos se genera algo bueno", enfatiza.

Leonardo Ramírez está convencido que quieren "llegar a ser la zona élite del plátano para competir en el mercado"- el cantón Garita Palmera es una zona identificada y reconocida por su potencial de producción de plátano en el país-. Sabe que la clave radica en el plátano de calidad. Los primeros pasos en esa dirección ya se han dado, vendiendo 300 cajas por semana en el mercado formal a través de la empresa El Salvador Produce.

El productor no se avergüenza al reconocer que antes no tenían la menor idea de cómo acceder al mercado formal. Se conformaban con ver, en la zona fronteriza donde están localizados, el ingreso diario de entre 15 y 20 camiones cargados de plátano procedentes Guatemala. En la actualidad, recapacita que eso daba ganas de llorar porque esa "platita" podría quedar en este país. De cara al futuro, está seguro que el entusiasmo de los productores de su zona abrirá más posibilidades de ganar mercado.

La apuesta que han hecho es notoria hasta en su vocabulario, ahora, con la asistencia técnica del equipo PAF MAG/CENTA/IICA, el grupo habla con palabras como: comercialización, poscosecha, competitividad. La cooperativa refleja la motivación y el deseo de hacer negocios, eso ha permitido que adopten con facilidad Buenas Prácticas Agrícolas (BPA) y que los resultados hayan permitido duplicar la mano de obra de la localidad en las labores productivas agrícolas.



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CASO GRANOS BÁSICOS

Asociación Agropecuaria del Sector 5 (AGROSEC)

Los tamales de AGROSEC llegarán a las mesas de los salvadoreños que residen en territorio norteamericano. Desde el valle de Zapotitán, con maíz cultivado y procesado en la misma zona, la planta de la Asociación Agropecuaria del Sector 5 trabaja para consolidarse, en breve tiempo, como una de las empresas nacionales exportadoras de tamal de elote de primera calidad.

Beatriz López, gerente de la Asociación, revela que ya mandaron muestras de su producto, bajo la modalidad congelada, a Estados Unidos y han pasado pruebas de la Administración de Drogas y Alimentos (FDA), por sus siglas en inglés. "Una empresa distribuidora en el mercado de los Estados Unidos, ha manifestado una intensión de compra de 108 mil tamales (33,750 libras) cada 20 días, y tenemos las condiciones y capacidad de proveerlo", manifestó.

Un plan de negocios formulado en el marco del PAF Cadenas Productivas está sirviendo como brújula para orientar a la Asociación en su búsqueda de mercado en el país del norte.

Personal de la AGROSEC ha sido capacitado mediante Escuelas de Campo en comercialización, a través de la metodología CEFE, incluyendo aplicación de buenas prácticas de manufactura, a fin de garantizar las condiciones de sanidad e inocuidad necesarias para que los tamales conquisten mercados exigentes.

Trascender de la producción primaria a la agregación de valor, es una gran diferencia para estos productores. Utilizar al máximo su capacidad productiva tanto en campo, como en la planta procesadora de tamales, la cual era una capacidad instalada subutilizada, se ha reflejado -en este caso- en mejores ingresos.

"Con los conocimientos impartidos en las Escuelas de Campo, los agricultores que hasta el año pasado producían 180 quintales, han pasado a 275 quintales en una parcela", afirma López.

Como parte de ese proceso de formación de capacidades, en junio del 2012 AGROSEC integró una delegación internacional que visitó Costa Rica, donde junto a otros 32 productores y representantes de Centros de Acopio y Servicios (CAS), tuvieron la oportunidad de conocer la experiencia de agricultores costarricenses en la operación y administración de centros de acopio para el acondicionamiento de granos básicos.

Las siembras programadas de maíz han garantizado la disponibilidad permanente del producto para abastecer la planta y mantener una producción sostenible en el tiempo para cumplir con los compromisos comerciales adquiridos o por suscribirse. La experiencia organizativa y gerencial de AGROSEC ha sido compartida incluso con otros productores locales que, al igual que ellos, buscan consolidar sus agronegocios sustentados en la producción de maíz.

AGROSEC reconoce que gracias al equipo PAF MAG/CENTA/IICA han logrado más contactos comerciales a nivel local, buscando además aprovechar oportunidades que ofrecen los mercados locales.

Las puertas comienzan a abrirse para AGROSEC, quienes a futuro también desean obtener maquinaria para la producción de harina, perfilando una diversificación con otros productos complementarios. De esa forma, otros granos básicos cultivados por ellos mismos pueden ser aprovechados como materia prima sujeta a transformación, creciendo en la cadena agroproductiva.

“Con los conocimientos impartidos en las Escuelas de Campo, los agricultores que hasta el año pasado producían 180 quintales, han pasado a 275 quintales en una parcela”

CASO CACAO

CDP Nahulingo

Marvin Zepeda del municipio de Nahulingo, Sonsonate, manifiesta que a éste lugar llegan muchos visitantes extranjeros preguntando por las raíces del cacao, quieren conocer el que fuera uno de los tesoros encontrados por los colonizadores españoles. Sin embargo, se llevan el desencanto de no encontrar más que relatos de lo que en el pasado fue el cultivo y sin probar un delicioso chocolate artesanal.

Actualmente, la historia comienza a cambiar con la intervención del Plan de Agricultura Familiar, mediante el Programa PAF Cadenas Productivas; la reactivación del cacao se ha iniciado.

"Los vecinos de mi comunidad nos hemos organizado para formar el Centro de Desarrollo Productivo (CDP Nahulingo); hemos participado en giras nacionales a la hacienda La Carrera (250 Mz), donde recibimos capacitación con expertos extranjeros, mediante la modalidad Escuelas de Campo (ECAS). Así mismo, como líderes del CDP fuimos a una gira internacional al Centro de Desarrollo Experimental de Cacao (CEDEC) de la Fundación Hondureña de Investigación Agrícola (FHIA). Actualmente, hemos recibido incentivos para construir un vivero modelo, donde trabajamos arduamente los miembros del CDP", cuenta el productor.

El vivero del CDP Nahulingo se ha convertido en un nuevo instrumento de trabajo para producir plantas de cacao y especies forestales. Constituye una oportunidad para vender plántulas, generar trabajo y abrir posibilidades de negocio como viveristas.

La capacidad instalada del vivero es de 45,000 plantines por año; con una expectativa de producción de 200,000 plantines de cacao durante los próximos cuatro años.
La asesoría técnica ha estado orientada a formar conocimientos en el manejo de sustratos, preparación de semillas, técnicas para construir viveros y otras acciones, para capacitar y reimpulsar el cultivo.

La familia Zepeda Mena reside en Sonsonate, tierra productora de cacao desde hace más de 500 años. Marvin nos cuenta que en la zona prevalecen tierras desocupadas o con cultivos frutícolas. El escenario comenzará a cambiar al incorporar bajo sombra cacao criollo, el que fuera en otros tiempos el principal cultivo del lugar, pero que está casi extinto. La diversificación anima a la comunidad de la zona, señala Zepeda, quien está seguro que la producción en finca se optimizará y se obtendrá mayor provecho.

"Sembrar cacao es una oportunidad de adquirir otros ingresos económicos, además, es una opción para personas que antes se dedicaban solo a rozar caña", manifiesta el productor.

Él, junto a su esposa, sus hijas y vecinos, algunos jóvenes y hasta ancianos de la comunidad, cuentan con conocimientos valiosos, heredados de generaciones anteriores y que han sido fortalecidas con los conocimientos actuales a través de capacitaciones recibidas directamente en el campo y han aprendido cómo formar un vivero en su CDP.

Otros 11 Centros de Desarrollo Productivo construirán viveros similares en distintos puntos del país para estructurar una oferta de plantas. La práctica tiene especial valor porque reproduce material vegetativo de calidad altamente productiva.

Si bien los precios internacionales abren un horizonte prometedor para el cacao fino de aroma, a nivel local, los productores de cacao salvadoreños prevén beneficios a nivel ecológico, económico, social y hasta turístico-cultural por la tradición precolombina ligada al producto.

A Yanira Mena Zepeda, esposa de Marvin, una taza de chocolate la inspira; ella afirma ser una mujer agradecida

con la vida, por contar como patrimonio familiar una finca, donde junto al trabajo de su esposo, sus hermanas y hasta de su madre, van a repoblar con cacao y dar los primeros pasos en la reactivación de un cultivo, con el cual sueña y vislumbra alcanzar mejores ingresos para consolidar la educación de sus hijas.

Así como el matrimonio Zepeda, otros 285 agricultores impulsan la cadena de cacao, alentados no solo por sueños, sino por la demanda del mercado local e

> “Sembrar cacao es una oportunidad de adquirir otros ingresos económicos, además, es una opción para personas que antes se dedicaban solo a rozar caña”,

CASO LÁCTEOS

Asociación Cooperativa Faro del Pacífico

Nelly Escalante de Urquilla, de la Asociación Cooperativa Faro del Pacífico que agrupa a 28 productores, en el municipio de Izalco, departamento de Sonsonate, está de acuerdo con el lema ¡Juntos Podemos! del Plan de Agricultura Familiar.

La productora se admira de su propio crecimiento y desarrollo. En la actualidad, entrega leche cruda de calidad y con inocuidad. Luego de algunas transformaciones, su producto llega hasta el paladar de los estudiantes de escuelas públicas que reciben una dotación para una alimentación sana y nutritiva, al ser beneficiarios del Programa Presidencial Vaso de Leche.

Con la intervención del PAF Cadenas Productivas, estos productores han tenido la oportunidad de transformar la visión de su hato ganadero en un modelo de negocio, con el agregado positivo que deriva del trabajo colectivo y asociado.

"Antes pensábamos que solo las industrias con máquinas podían producir leche grado A. Mientras que ahora sabemos que nosotros podemos producir leche higiénica, con el concepto que ese es un alimento para un ser humano", afirma Escalante de Urquilla.

En un inicio, todo se remontaba a pequeños negocios individuales, luego se consolidó una oferta de leche bajo la modalidad de asociados e iniciaron acciones técnicas, pasando a un Centro de Acopio y Servicio (CAS), con la capacidad de acopiar y comercializar alrededor de 4,000 botellas de leche cruda refrigerada grado A.

Un seguimiento con asesoría técnica, fortaleciendo, entre otros temas, conocimientos sobre la Norma Salvadoreña Obligatoria (NSO), registro del Impuesto al Valor Agregado (IVA) y aspectos tributarios les ha permitido tocar otra escala comercial al ingresar al mercado formal. Y el empuje de incentivos como cuatro tanques refrigerantes, con una capacidad total de acopio de 5,200 botellas diarias; una máquina ensiladora, cinco máquinas de ordeño y tres sistemas de riego han impulsando, sin duda, la capacidad productiva de este grupo.

Faro del Pacífico reconoce que para llegar a ese nivel han tenido que aplicar todo lo aprendido en las asesorías técnicas del equipo PAF MAG/CENTA/IICA. Ha sido un proceso, que inició convirtiéndolos en alumnos de las Escuelas de Campo y, posteriormente, de Competencias Económicas basada en la Formación Emprendedora (CEFE). En esas sesiones, aprendieron diversas temáticas, entre ellas la producción de leche higiénica; métodos como la conservación de pastos y forrajes, y elaboración de silos de "montón".

"Antes dábamos tres quintales de concentrado por ordeño, pero lo hemos reducido a un quintal, ahora mezclamos y ahorramos. Eso es posible luego de habernos enseñado a hacer silos", sostiene la productora de la cadena de lácteos.

La formación empresarial es evidente en el espíritu de Nelly Escalante, cuando manifiesta haber aprendido a pensar bajo la óptica de la visión y enfoque empresarial, según la cual no se limita a producir, sino trasciende con mentalidad de empresa agropecuaria.


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La asociación ha alcanzado ventas de leche en promedio por $ 49,000 dólares al mes, ha establecido un precio de $0.41 centavos de dólar por botella, rompiendo con las fluctuaciones de precios altos y bajos; han logrado comprar de manera asociada insumos productivos, principalmente alimento concentrado.

"Vamos a seguir produciendo para el próximo año más leche. En Faro del Pacífico, decimos ¡Unidos somos grandes!", esa es la frase que refleja el entusiasmo de la ganadera y sus compañeros.

> "Antes dábamos tres quintales de concentrado por ordeño, pero lo hemos reducido a un quintal, ahora mezclamos y ahorramos. Eso es posible luego de habernos enseñado a hacer silos",

PRESENTACIÓN

Plan dirigido a familias rurales en sus terrenos productivos.

“El Salvador es nuevamente una alfombra verde, no hay espacio que no se haya quedado sin sembrar”.

“El Salvador es nuevamente una alfombra verde, no hay espacio que no se haya quedado sin sembrar”, expresó Gerardo Escudero, Representante del IICA en El Salvador, quien en el contexto de los Avances del PAF Cadenas Productivas enmarcó el informe de Rendición de Cuentas de la Oficina del IICA en El Salvador.

Como un hecho histórico reciente del país, calificó Escudero los avances del Programa. “Es conmovedor ver en concreto los avances en lo productivo; hay una mayor producción y productividad; mayor calidad y acercamiento a los mercados formales, privados e institucionales; hay acceso a créditos y proyectos de inversión; mayor organización y asociatividad”, afirmó en su discurso.

El Representante expresó su reconocimiento al Ministerio de Agricultura y Ganadería (MAG), al Centro Nacional de Tecnologías Agropecuaria y Forestal (CENTA), a la Escuela Nacional de Agricultura (ENA) por el liderazgo y entereza demostrados en su papel de facilitadores y coadyuvantes en el proceso de implementación del PAF Cadenas Productivas.

“Hoy la ruta y las prioridades están más marcadas que nunca; sabemos hacia dónde ir. Existen grandes posibilidades de hacer trascender de un gobierno a otro la decisión de regresar y recuperar el campo, pues los mismos productores lo están demandando”, puntualizó.

Gerardo Escudero Columna
Representante del IICA en El Salvador

...”fue necesario hacer un cambio de visión para abordar la realidad del agro salvadoreño”.

2. MARCO CONCEPTUAL

Compartiendo conocimientos técnicos con productores.

"Innovación para el desarrollo" es la visión en la que se basa el modelo de transferencia tecnológica del PAF, cuyo eje central es el cambio cognitivo en los actores, pues se reconoce que sólo la cognición es capaz de producir la adaptación, el cambio, el aprendizaje y el mejoramiento continuo.

La innovación parte de conocimientos previos. Implica la gestión del cambio del conocimiento para entender la realidad y actuar en forma distinta. Es un proceso colectivo de colaboración, negociación y aprendizaje que busca agregar valor económico o social a una comunidad. En ese sentido, la innovación cobra más sentido cuando se enfoca hacia el desarrollo. Así, la agricultura familiar campesina entra en una fase nueva a partir de los procesos de innovación de las cadenas productivas desde los territorios y sus actores locales, la interpretación de los requerimientos y el abordaje del cambio tecnológico.

Todo ello da origen a los Sistemas de Innovación Agroalimentarios (SIA), sueltos, informales, implícitos, de fácil descomposición y recombinación. De esa manera, hombro con hombro, día con día, cada persona de una comunidad o un territorio aporta al desarrollo humano e integral de los suyos.

Formación de facilitadores jóvenes y Escuelas de Campo para Agricultures (ECA).

El proceso de innovación agroalimentario entraña cuatro elementos: a) la organización de una red a partir de una plataforma de demanda, servicios, seguimiento y evaluación; b) una estructura de operación con procesos, procedimientos, toma de decisiones, roles, funciones y despliegue de los servicios; c) un método de aprendizaje que se alimenta del monitoreo y seguimiento para asegurar la adopción, adaptación, el cambio de prácticas y la adquisición de nuevas competencias por parte de los actores y d) un método de comunicación para un flujo de información, diálogo y negociación entre los actores.

Usos de metodos prácticos de aprendizaje.

3. EL PAF COMO APUESTA POR EL AGRO

Inaguración Año Agricola, 2011.

El 21 de febrero de 2011 marca un punto de quiebre en cuanto al abandono y pobreza en la que vivían 390 mil familias salvadoreñas. Ese día, el gobierno salvadoreño presentó de manera oficial el Plan de Agricultura Familiar (PAF), pensado para apoyar a los pequeños y medianos productores agropecuarios de un agro abandonado por décadas. En términos generales, el programa fue diseñado para incrementar la disponibilidad de alimentos e ingresos de 325 mil familias que desarrollan agricultura familiar de subsistencia y de otras 65 mil familias que se encuentran vinculadas con los mercados. El objetivo final del PAF se centraría en alcanzar la inserción exitosa en cadenas de valor y en un desarrollo sostenible de la economía de los territorios.

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P.imprenta : Xalisco, Nayarit; México :. El autor,. 1988. 73 h. ; 27 cm.
Notas : (Ingeniero Agrónomo) U. A. N.
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P.imprenta : Tepic, Nayarit ; México :. El Autor,. 2009. 50 h. : 28 cm.
Notas : (Médico Veterinario Zootecnista) U.A.N.
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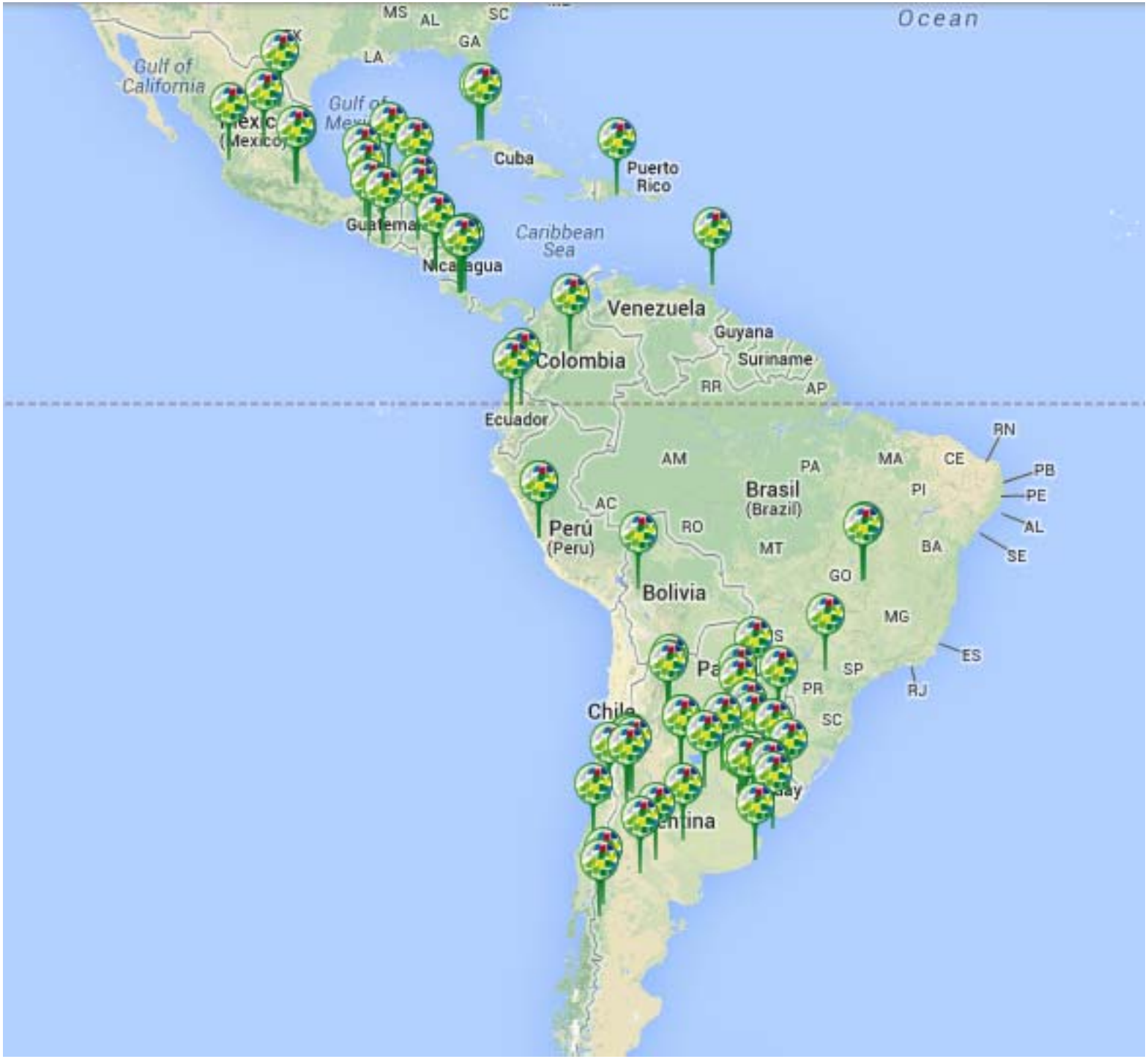
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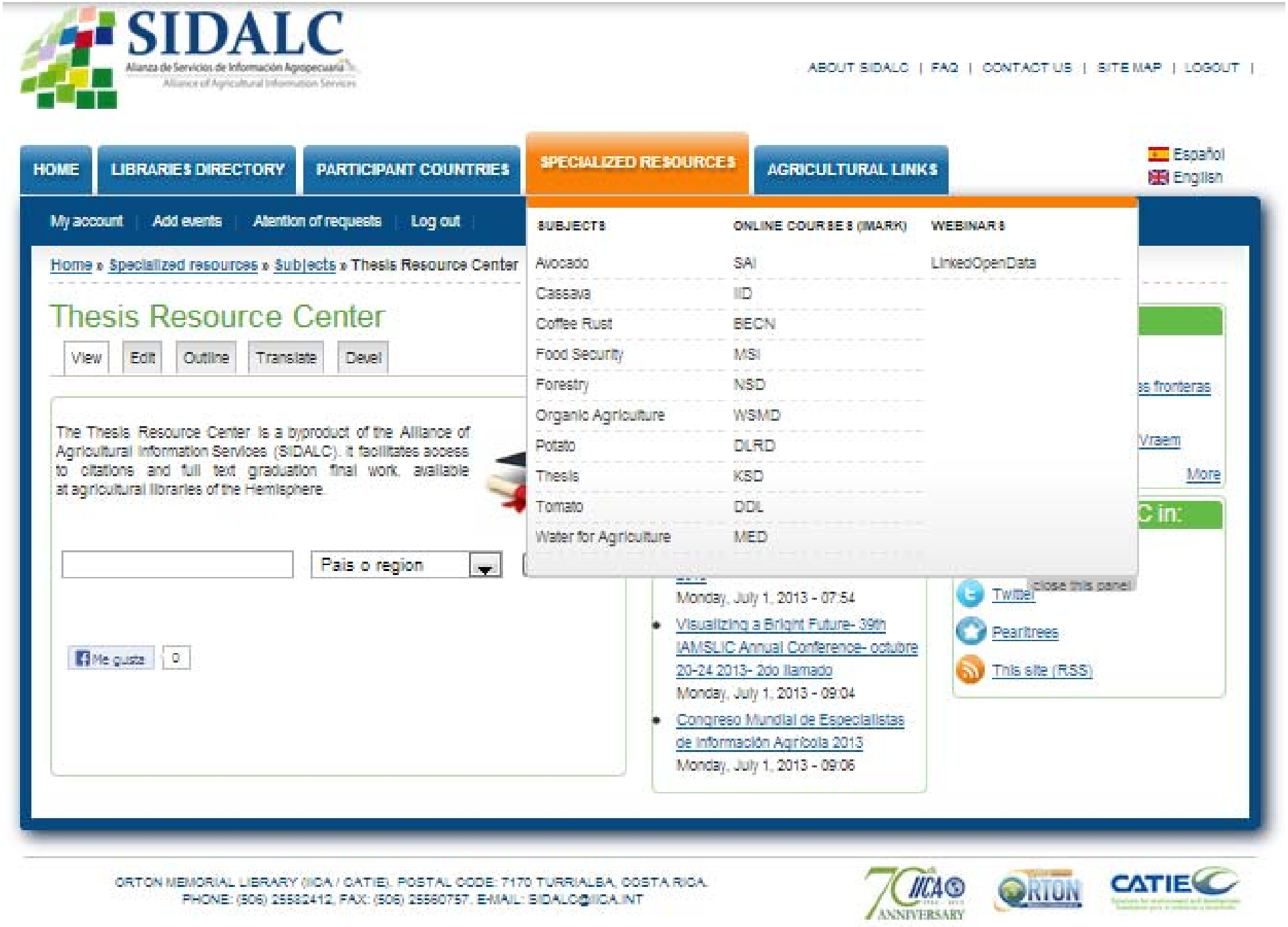
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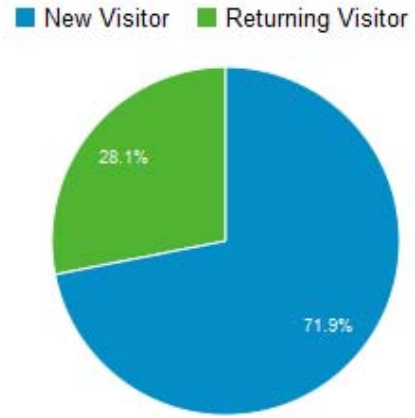
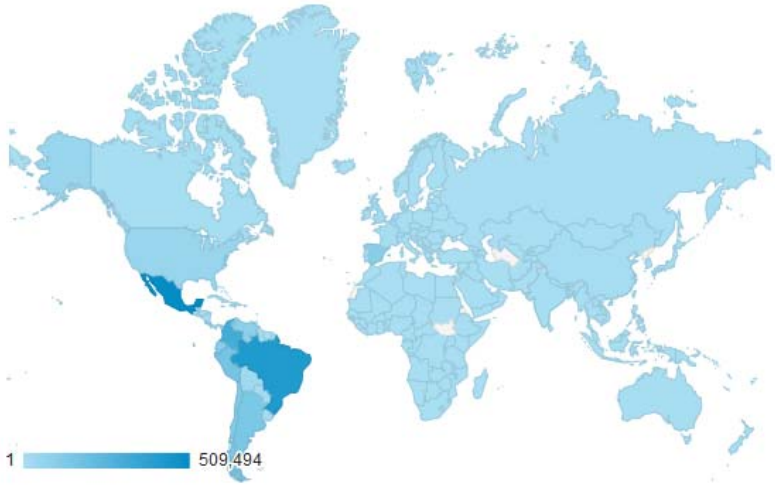
1,797,955 people visited this site

Visits **2,434,716**	Unique Visitors **1,797,955**
Pageviews **9,469,487**	Pages / Visit **3.89**
Avg. Visit Duration **00:01:02**	Bounce Rate **1.05%**

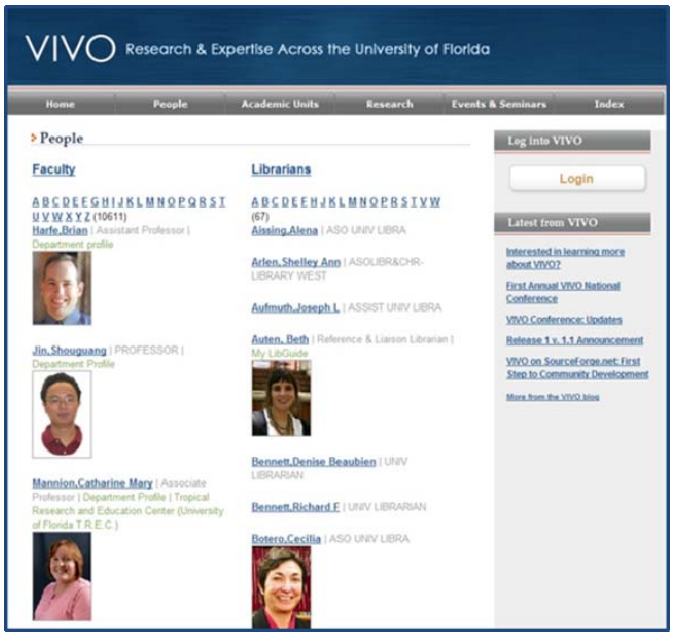


Jun 1, 2012 - Jun 30, 2013

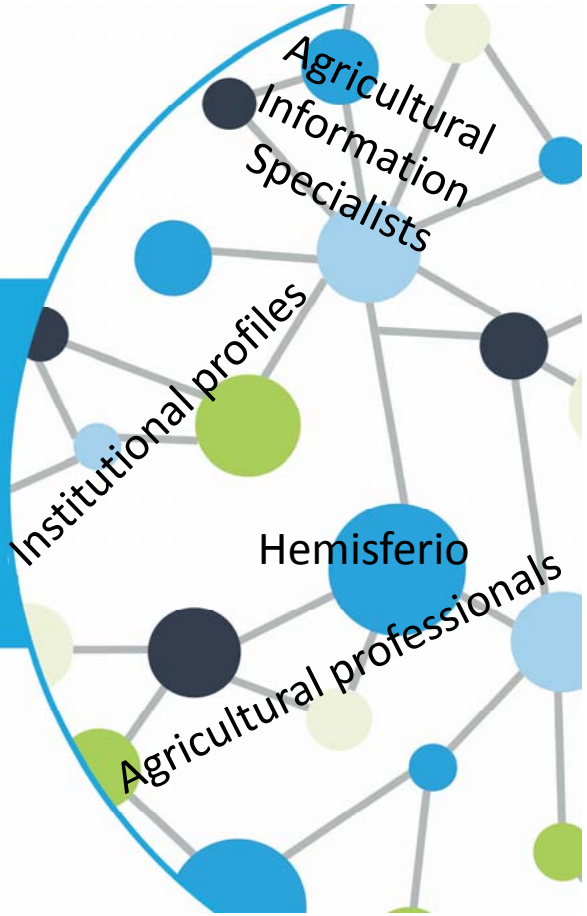


Country / Territory	Visits	Pages / Visit
	2,434,716 % of Total: **100.00%** (2,434,716)	**3.89** Site Avg: **3.89** (0.00%)
1. Mexico	**509,494**	3.74
2. Brazil	**424,809**	2.90
3. Colombia	**308,317**	3.79
4. Peru	**159,008**	4.05
5. Argentina	**141,311**	4.39
6. Chile	**116,313**	3.33
7. Spain	**98,957**	3.01
8. Ecuador	**97,721**	4.38
9. Venezuela	**84,058**	3.73
10. Costa Rica	**82,894**	10.15

VIVO



VIVO LAC: To facilite the linking of profesionals in agriculture



Joint Initiative with the U.S. Department of Agriculture

Open Data

Open Learning Resources

Thank you for your attention

www.sidalc.net

sidalc@iica.int

From Local to Global: Launching the New Rangelands West Portals and Database

GLOBAL RANGELANDS

By Jeanne L. Pfander, Barbara S. Hutchinson, Valeria Pesce and Matt Rahr

XIV IAALD World Congress 2013
Cornell University
July 22, 2013

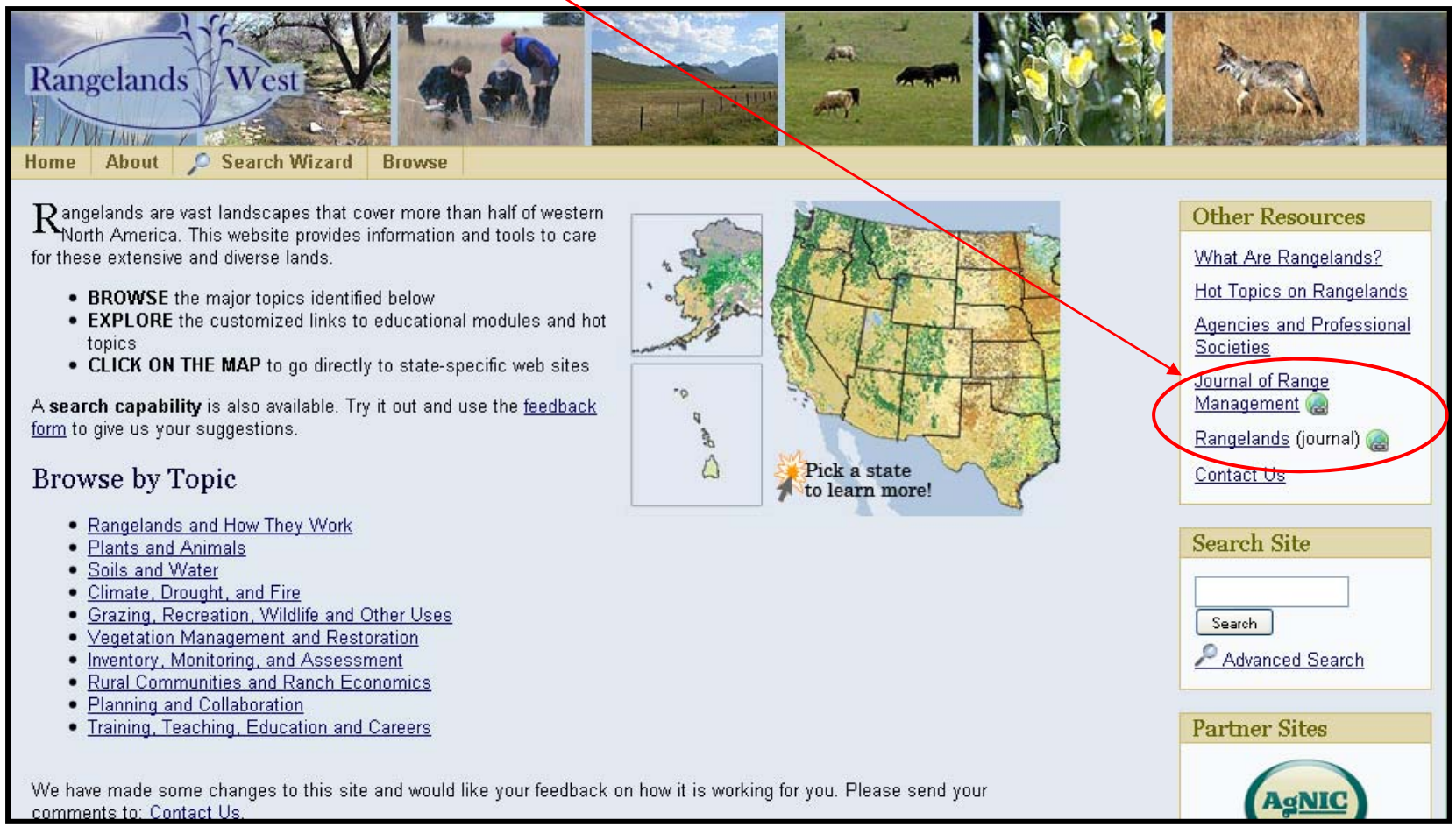
Slide 1

t2 This slide seems a bit busy with all the images, logos and words...
titan, 6/27/2013

Rangelands Partnership

- Began in 1995 as an AgNIC / University of Arizona Libraries project partnering with UA CALS rangelands specialists
- Invited Western Land Grant Universities (LGUs) to join in a Western Rangelands Partnership in 2001
- Now officially includes 19 LGUs with international participation from Australia, Mexico, and FAO

Rangelands West: Archival Repository for SRM Journals



SRM Society for Range Management

allen press

Recognized Need to Change and Evolve…and gain new resources

- Conducted needs assessment (focus groups) and developed business plan
- *Purpose*: to guide development of a technical requirements for total redesign
- Key Recommendations from Needs Assessment :
  - Update content frequently
  - Fast and relevant searches
  - Libraries of documents & images
  - Location-specific information
  - Tools to foster interaction/networking
  - Searchable directory of experts
  - Revenue generation
    - Grants
    - Partner contributions
    - Sponsorships

Rangelands West

USDA International Science Education Program Grant – 2010

- University of Arizona
- University of California, Davis
- University of Idaho
- Rangelands Australia
- Food and Agriculture Organization of the United Nations

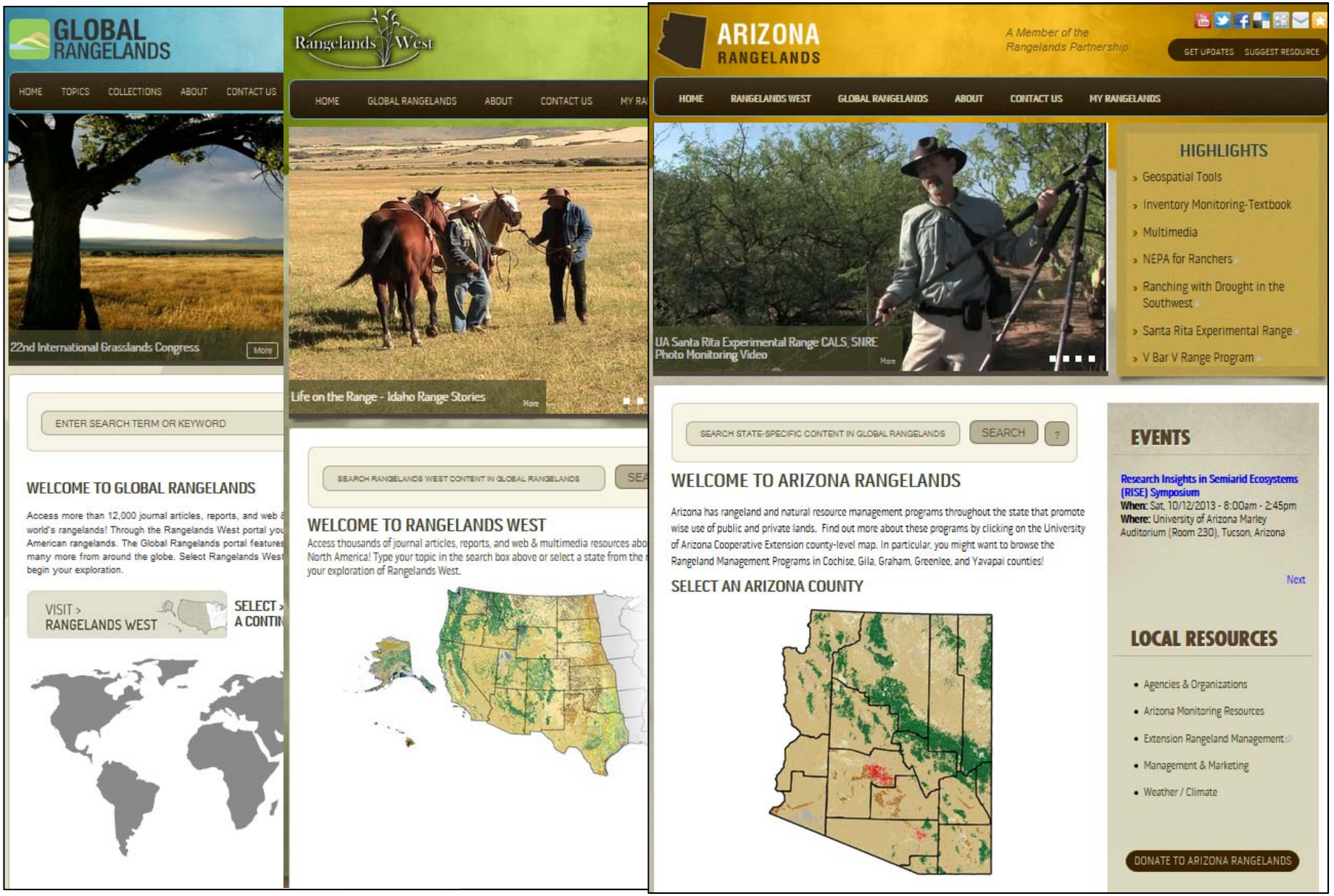
Other *Signatories*
- eXtension
- GSSA

Proposal Objectives

- Redesign Rangelands West portal to host repository of global rangelands full-text and evaluated resources
- Establish partnerships with key organizations/associations around the world as contributors to “Global Rangelands”
- Upload and create infrastructure to provide faster and more user-friendly access to content
- Create customized search interface (faceted search) and implement social networking applications
- Develop two multimedia learning modules (overview & Australia)
- Create synthesis papers on international outreach/Extension practice for natural resources management

Result: Three New Portals, New Functionality, and New Local Sites

t1



Slide 7

t1 Is this redundant? Already say three new portals...
titan, 6/27/2013

Tools and Resources

Multimedia

Global Rangelands YouTube Channel and Playlists

- Climate
- Domestic and Wild Animals of Rangelands
- Economics Associated with Rangelands
- Fire
- Invasive Species
- Planning and Collaboration
- Public Outreach
- Uses of Range and Pasturelands
- Vegetation Management and Restoration
- Vegetation Monitoring

Also includes:

- Audio Files
- Images

International Outreach

A resource on global extension practice involving participatory approaches and the use of Information and Communication Technologies (ICTs)

Find out more about:

- International Extension Practices
- Case Study Profiles
- Organizations
- Multimedia Resources
- Use of ICTs (Information Communication Technologies)

GLOBAL RANGELANDS

In Collaboration With Rangelands West

GET UPDATES SUGGEST RESOURCE

HOME TOPICS COLLECTIONS ABOUT CONTACT US MY RANGELANDS

Organizations

SHARE

Organizations: Table

Name	City	State/Province	Country	URL
AGNIC (The Agriculture Network Information Centre)	Washington DC	District Of Columbia	United States	http://www.agnic.org
American Forage and Grassland Council	Berea	Kentucky	United States	http://www.afgc.org/
American Sheep Industry Association	Eaglewood	Colorado	United States	http://www.sheepusa.org
Arizona State Land Department News	Phoenix	Arizona	United States	http://www.land.state.az.us/news.htm
Asocicion Argentina de Produccion Animal	Buenos Aires		Argentina	http://www.aapa.org.ar/web/en/contact
Australia Rangeland Society	Aldgate		Australia	http://www.austrangesoc.com/site/

EVENTS RESOURCES

- American Forage and Grassland Council
- ARS News and Events
- ATTRA Events
- Grassland Society of Southern Africa upcoming events
- Grazing Lands Conservation Initative Events
- Southeast Farm Press Events
- SRM Events
- USDA RSS Directory
- Western Farm Press

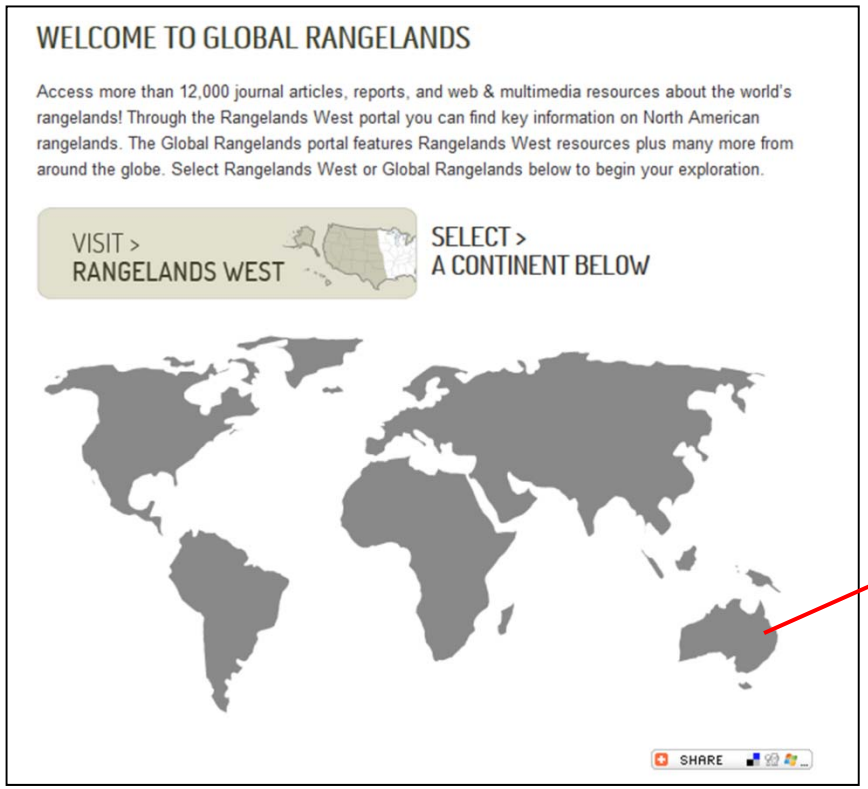
NEWS RESOURCES

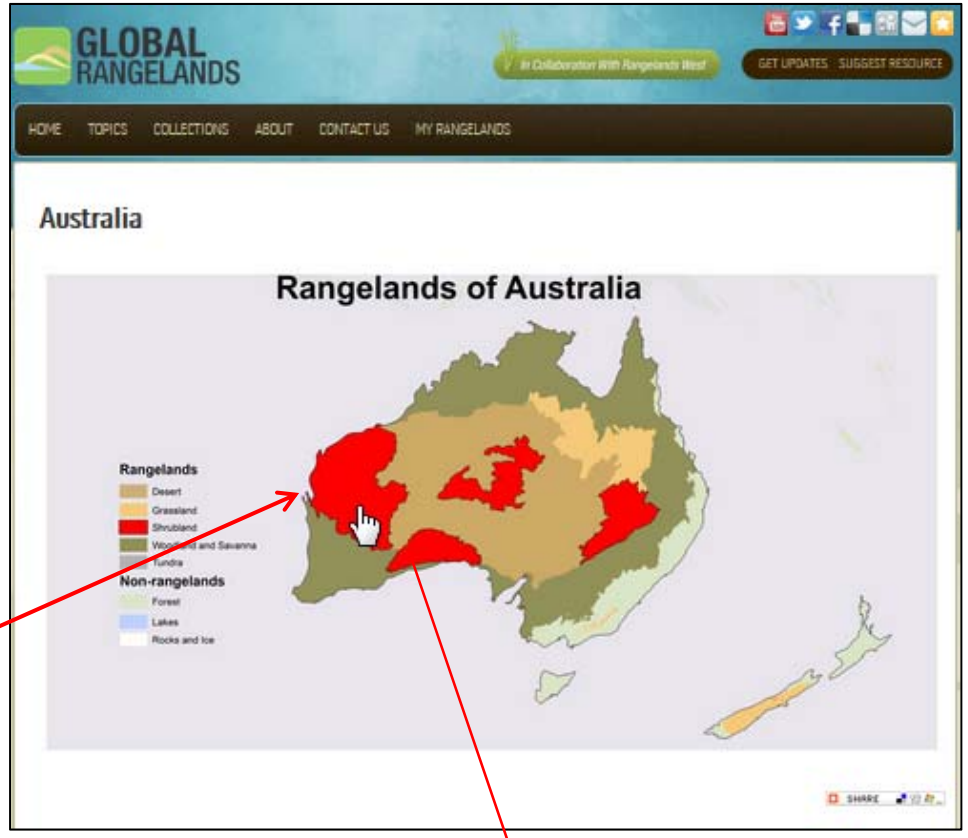
- USDA
- People Livestock and Environment ILRI - email alert -
- SRM Rangeland News
- LTER Network News

more

SPONSORS

allen press


WELCOME TO GLOBAL RANGELANDS
Access more than 12,000 journal articles, reports, and web & multimedia resources about the world's rangelands! Through the Rangelands West portal you can find key information on North American rangelands. The Global Rangelands portal features Rangelands West resources plus many more from around the globe. Select Rangelands West or Global Rangelands below to begin your exploration.
VISIT >
RANGELANDS WEST
SELECT >
A CONTINENT BELOW
SHARE

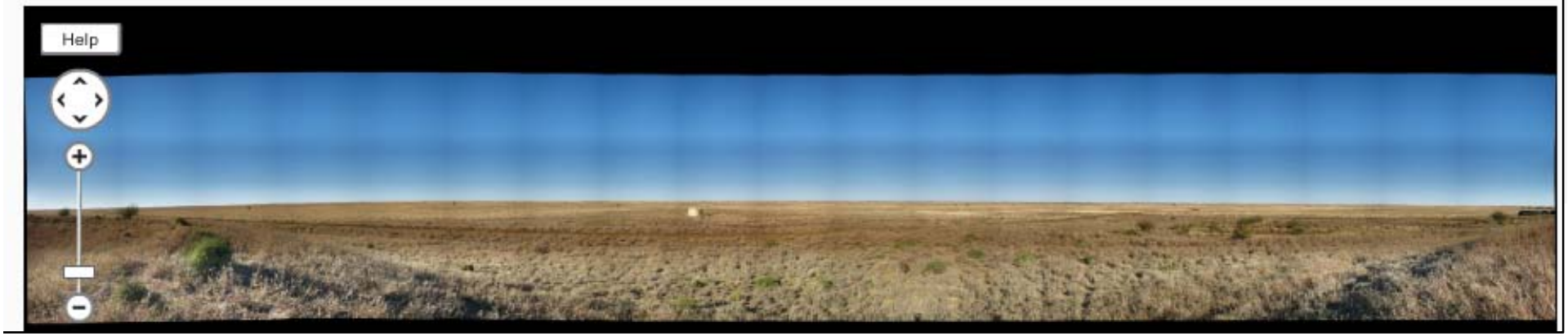

GLOBAL
RANGELANDS
HOME
TOPICS
COLLECTIONS
ABOUT
CONTACT US
MY RANGELANDS
Australia
Rangelands of Australia
Rangelands
Desert
Grassland
Shrubland
Non-rangelands
Forest
Lakes
Rocks and Ice
SHARE

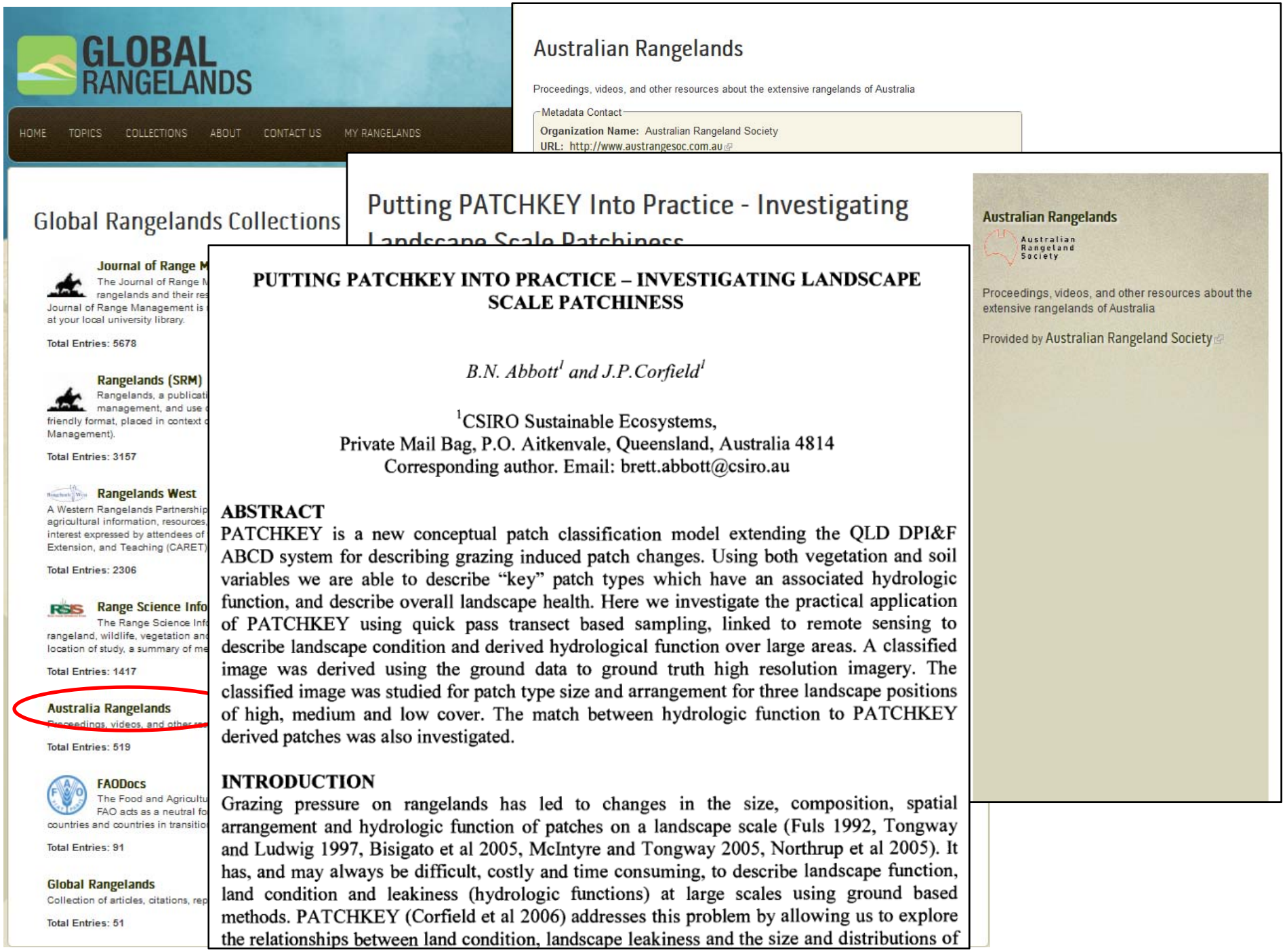

Search
Wrangle
World Rangelands Learning Experience
Home
The whole world
North America
Home on the Range
Australia
The Land Down Under
South America
Que saudade!
Eurasia
Ocean of Grass
Africa
Lions and Tigers!
Woodlands
Grasslands
Shrublands

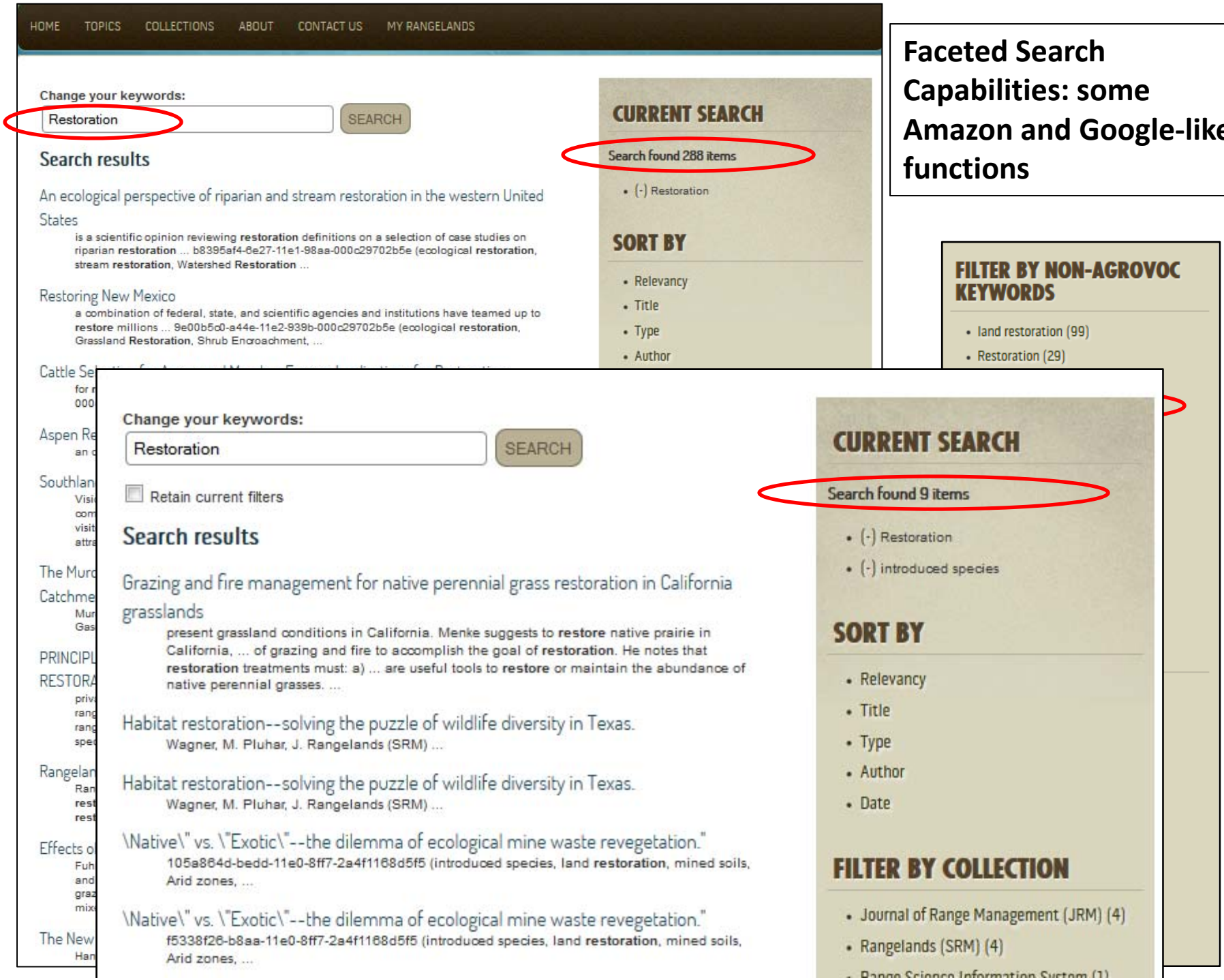
Australian Shrublands

Mitchell Grass Plains Gigapan

February 10, 2012 | Category: Australia, Australia Gigapan, Australia Grasslands, Gigapans, Tussock Grasslands | No Comments

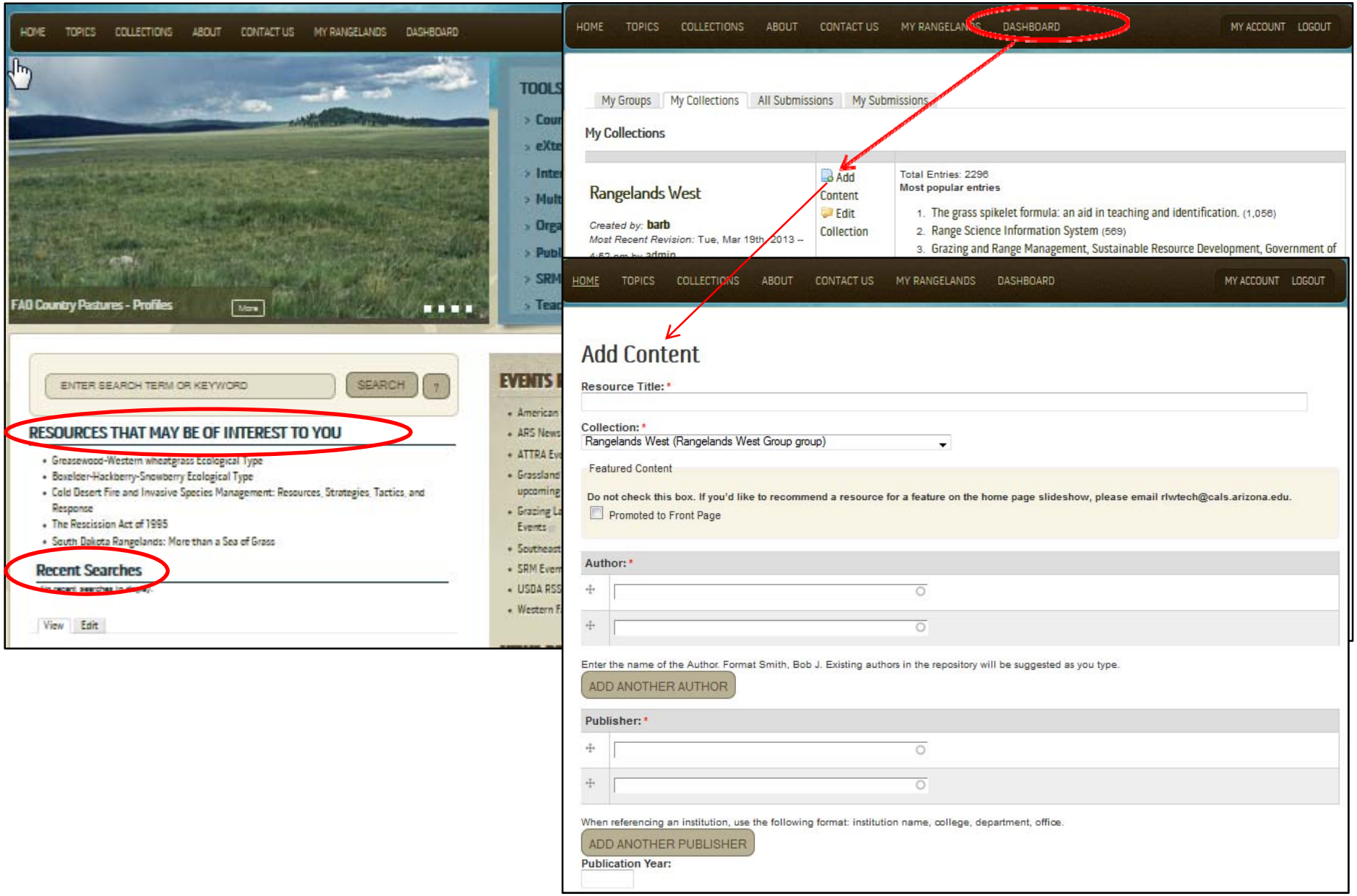


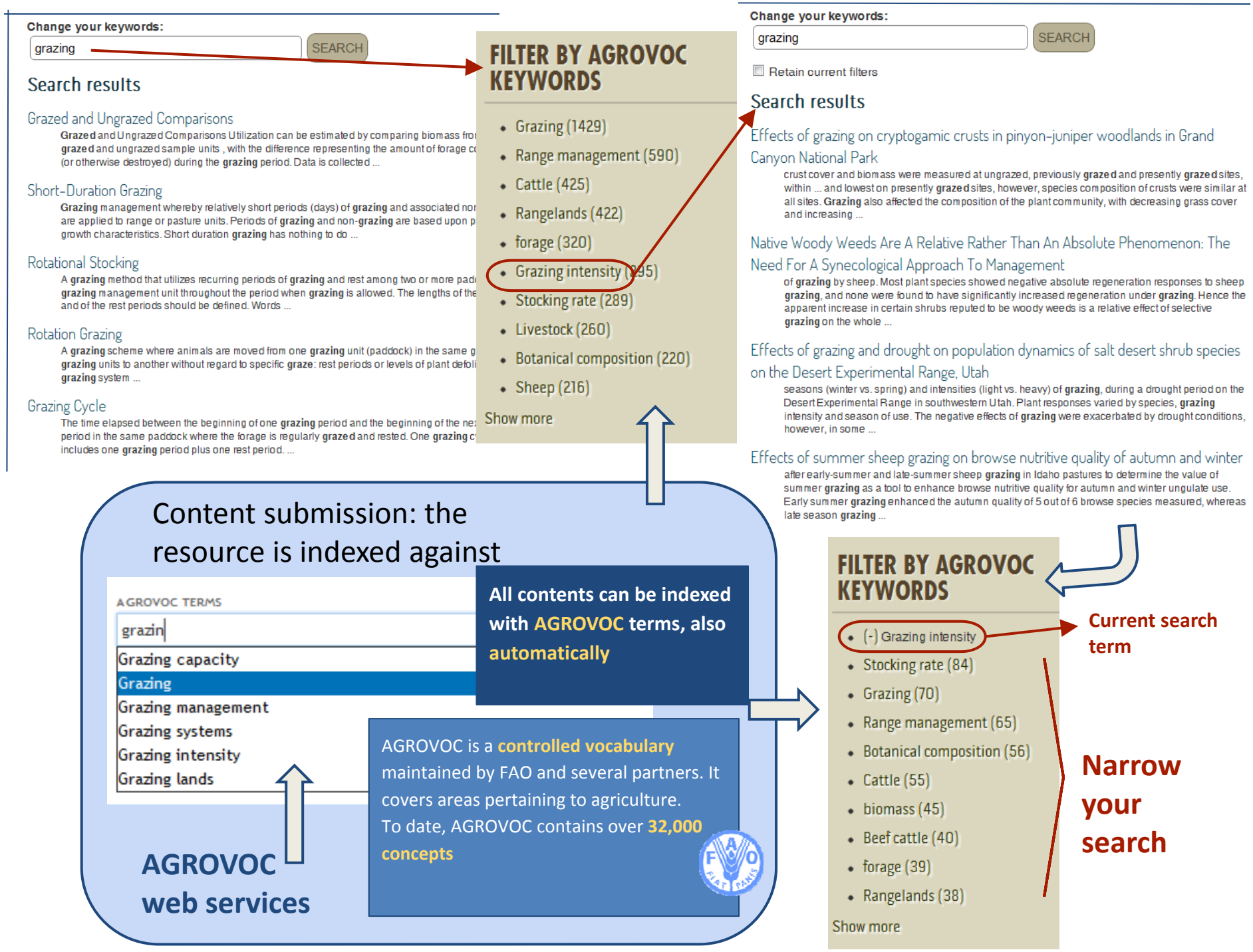

GLOBAL RANGELANDS
HOME TOPICS COLLECTIONS ABOUT CONTACT US MY RANGELANDS
Global Rangelands Collections
Journal of Range M
The Journal of Range M
rangelands and their res
Journal of Range Management is
at your local university library.
Total Entries: 5678
Rangelands (SRM)
Rangelands, a publicati
management, and use
friendly format, placed in context
Management).
Total Entries: 3157
Rangelands West
A Western Rangelands Partnership
agricultural information, resources,
interest expressed by attendees of
Extension, and Teaching (CARET)
Total Entries: 2306
Range Science Info
The Range Science Inf
rangeland, wildlife, vegetation an
location of study, a summary of me
Total Entries: 1417
Australia Rangelands
Proceedings, videos, and other re
Total Entries: 519
FAODocs
The Food and Agricultu
FAO acts as a neutral fo
countries and countries in transitio
Total Entries: 91
Global Rangelands
Collection of articles, citations, rep
Total Entries: 51
Australian Rangelands
Proceedings, videos, and other resources about the extensive rangelands of Australia
Metadata Contact
Organization Name: Australian Rangeland Society
URL: http://www.austrangesoc.com.au
Putting PATCHKEY Into Practice - Investigating
Landscape Scale Patchiness
PUTTING PATCHKEY INTO PRACTICE – INVESTIGATING LANDSCAPE SCALE PATCHINESS
B.N. Abbott[1] and J.P.Corfield[1]
[1]CSIRO Sustainable Ecosystems,
Private Mail Bag, P.O. Aitkenvale, Queensland, Australia 4814
Corresponding author. Email: brett.abbott@csiro.au
ABSTRACT
PATCHKEY is a new conceptual patch classification model extending the QLD DPI&F ABCD system for describing grazing induced patch changes. Using both vegetation and soil variables we are able to describe "key" patch types which have an associated hydrologic function, and describe overall landscape health. Here we investigate the practical application of PATCHKEY using quick pass transect based sampling, linked to remote sensing to describe landscape condition and derived hydrological function over large areas. A classified image was derived using the ground data to ground truth high resolution imagery. The classified image was studied for patch type size and arrangement for three landscape positions of high, medium and low cover. The match between hydrologic function to PATCHKEY derived patches was also investigated.
INTRODUCTION
Grazing pressure on rangelands has led to changes in the size, composition, spatial arrangement and hydrologic function of patches on a landscape scale (Fuls 1992, Tongway and Ludwig 1997, Bisigato et al 2005, McIntyre and Tongway 2005, Northrup et al 2005). It has, and may always be difficult, costly and time consuming, to describe landscape function, land condition and leakiness (hydrologic functions) at large scales using ground based methods. PATCHKEY (Corfield et al 2006) addresses this problem by allowing us to explore the relationships between land condition, landscape leakiness and the size and distributions of
Australian Rangelands
Australian Rangeland Society
Proceedings, videos, and other resources about the extensive rangelands of Australia
Provided by Australian Rangeland Society



Faceted Search Capabilities: some Amazon and Google-like functions

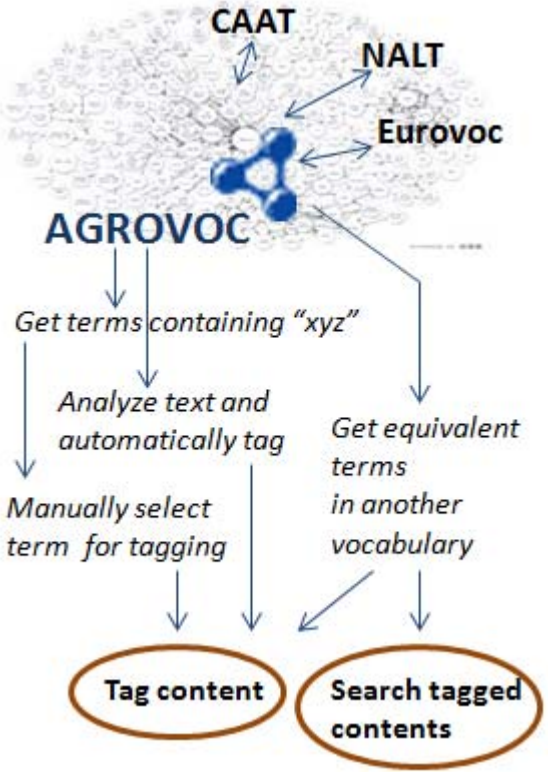
Join “My Rangelands”




Change your keywords:
grazing
SEARCH
Search results
Grazed and Ungrazed Comparisons
Grazed and Ungrazed Comparisons Utilization can be estimated by comparing biomass fro
grazed and ungrazed sample units , with the difference representing the amount of forage c
(or otherwise destroyed) during the grazing period. Data is collected ...
Short-Duration Grazing
Grazing management whereby relatively short periods (days) of grazing and associated nor
are applied to range or pasture units. Periods of grazing and non-grazing are based upon p
growth characteristics. Short duration grazing has nothing to do ...
Rotational Stocking
A grazing method that utilizes recurring periods of grazing and rest among two or more pad
grazing management unit throughout the period when grazing is allowed. The lengths of the
and of the rest periods should be defined. Words ...
Rotation Grazing
A grazing scheme where animals are moved from one grazing unit (paddock) in the same g
grazing units to another without regard to specific graze: rest periods or levels of plant defoli
grazing system ...
Grazing Cycle
The time elapsed between the beginning of one grazing period and the beginning of the ne
period in the same paddock where the forage is regularly grazed and rested. One grazing c
includes one grazing period plus one rest period. ...
FILTER BY AGROVOC KEYWORDS
Grazing (1429)
Range management (590)
Cattle (425)
Rangelands (422)
forage (320)
Grazing intensity (295)
Stocking rate (289)
Livestock (260)
Botanical composition (220)
Sheep (216)
Show more
Change your keywords:
grazing
SEARCH
Retain current filters
Search results
Effects of grazing on cryptogamic crusts in pinyon-juniper woodlands in Grand Canyon National Park
crust cover and biomass were measured at ungrazed, previously grazed and presently grazed sites, within ... and lowest on presently grazed sites, however, species composition of crusts were similar at all sites. Grazing also affected the composition of the plant community, with decreasing grass cover and increasing ...
Native Woody Weeds Are A Relative Rather Than An Absolute Phenomenon: The Need For A Synecological Approach To Management
of grazing by sheep. Most plant species showed negative absolute regeneration responses to sheep grazing, and none were found to have significantly increased regeneration under grazing. Hence the apparent increase in certain shrubs reputed to be woody weeds is a relative effect of selective grazing on the whole ...
Effects of grazing and drought on population dynamics of salt desert shrub species on the Desert Experimental Range, Utah
seasons (winter vs. spring) and intensities (light vs. heavy) of grazing, during a drought period on the Desert Experimental Range in southwestern Utah. Plant responses varied by species, grazing intensity and season of use. The negative effects of grazing were exacerbated by drought conditions, however, in some ...
Effects of summer sheep grazing on browse nutritive quality of autumn and winter
after early-summer and late-summer sheep grazing in Idaho pastures to determine the value of summer grazing as a tool to enhance browse nutritive quality for autumn and winter ungulate use. Early summer grazing enhanced the autumn quality of 5 out of 6 browse species measured, whereas late season grazing ...
Content submission: the resource is indexed against
AGROVOC TERMS
grazin
Grazing capacity
Grazing
Grazing management
Grazing systems
Grazing intensity
Grazing lands
All contents can be indexed with AGROVOC terms, also automatically
AGROVOC is a controlled vocabulary maintained by FAO and several partners. It covers areas pertaining to agriculture. To date, AGROVOC contains over 32,000 concepts
AGROVOC web services
FILTER BY AGROVOC KEYWORDS
(-) Grazing intensity
Stocking rate (84)
Grazing (70)
Range management (65)
Botanical composition (56)
Cattle (55)
biomass (45)
Beef cattle (40)
forage (39)
Rangelands (38)
Show more
Current search term
Narrow your search

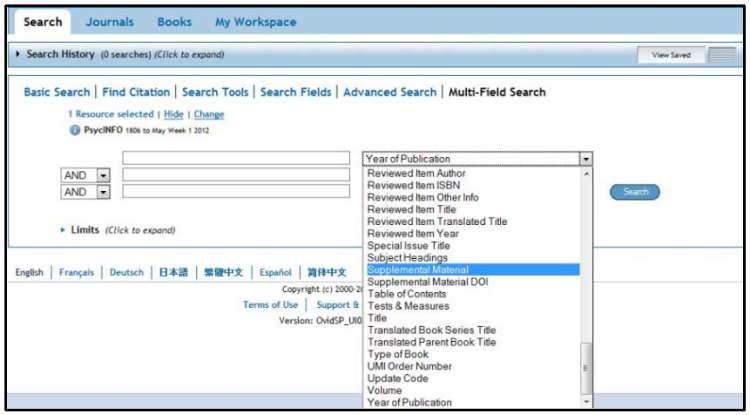
Leveraging AGROVOC

- ***Controlled vocabulary***
  - To always use the same terms for the same concepts
- ***Web services***
  - To integrate AGROVOC in the submission workflow: controlled terms are automatically suggested when tagging --> only terms that are in AGROVOC can be used
- ***Automatic indexing services***
  - To aggregate relevant contents from other sources (e.g. via RSS feeds or page scraping) and automatically tag them with AGROVOC terms
- ***Wide usage --> greater potential for sharing***
  - To seamlessly integrate contents from other information services that use AGROVOC (see the FAODoc collection in the portal)
  - To make contents from Global Rangelands re-usable by services using AGROVOC
- ***Mapping to other thesauri*** *(NALT, CAAT, Eurovoc)*
  - To integrate and search contents originally tagged with other thesauri

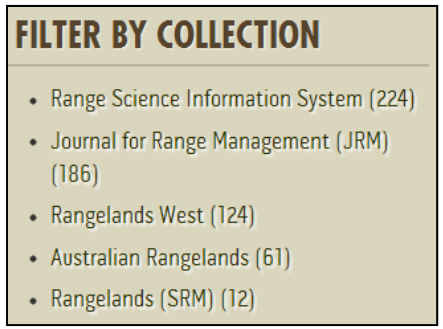


Global Rangelands, Phase II

- *New Features*
  - Advanced Searching
  - Faceted “Browsing”
  - Mobile Responsive design
  - Search box on each Collection page
  - EndNote/RefWorks export of content



- *Improvements*
  - Increase Google Search Ranking
  - Browse Authors by Letter
  - Send welcome email when people sign up for “My Rangelands”
  - Change Global Rangelands front page slideshow to redirect to *any* URL, not just content within the database.
  - Print-friendly pages



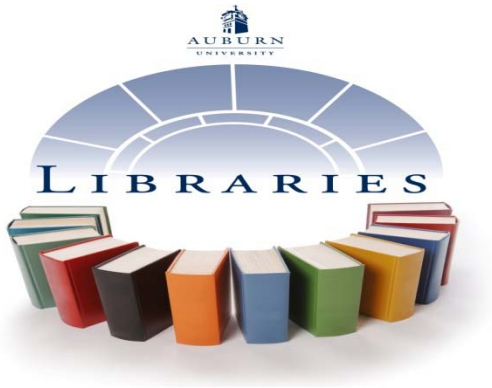
Rangelands West, Phase II

- *Improvements*
  - Ability to add five slideshow features to home page
  - Create secondary page showing all future events
  - Ingest RSS feed of upcoming events
- *User Interface*
  - Search results template matches RangelandsWest/State site
  - “Go back” to State/RLW homepage from search results
- *New Sites*
  - Additional State sites (templates)
  - Facebook and Google+ “sites”
- *Harvest from new sources*
  - *SRM Journals, Australian Rangelands*

GLOBAL RANGELANDS

THANK YOU! Questions?

Please “Like Us” (Rangelands West) on Facebook!



Chat Reference Service at Auburn University Libraries

Successes and Potential

Claudine Arnold Jenda

Agriculture Librarian

Reference & Instruction Services

Auburn University Libraries

Auburn, AL 36849-5606, USA

(334) 844-1658

Jendaca@auburn.edu

IAALD 2013 WORLD CONGRESS, JULY 21-24, 2013 Ithaca, NY USA

Auburn University

Established in 1856

- Land-grant University
- 25,000 Students
- Engineering, Science Agriculture and all disciplines
- Undergraduate Programs
- Graduate Programs
- Research Programs
- Service & Outreach

Auburn University Libraries

Association of Research Libraries (ARL)

- 8 million volumes
- 10 million archives & manuscripts
- 765,710 e-books
- 59,935 Serials
- 35,000 periodicals

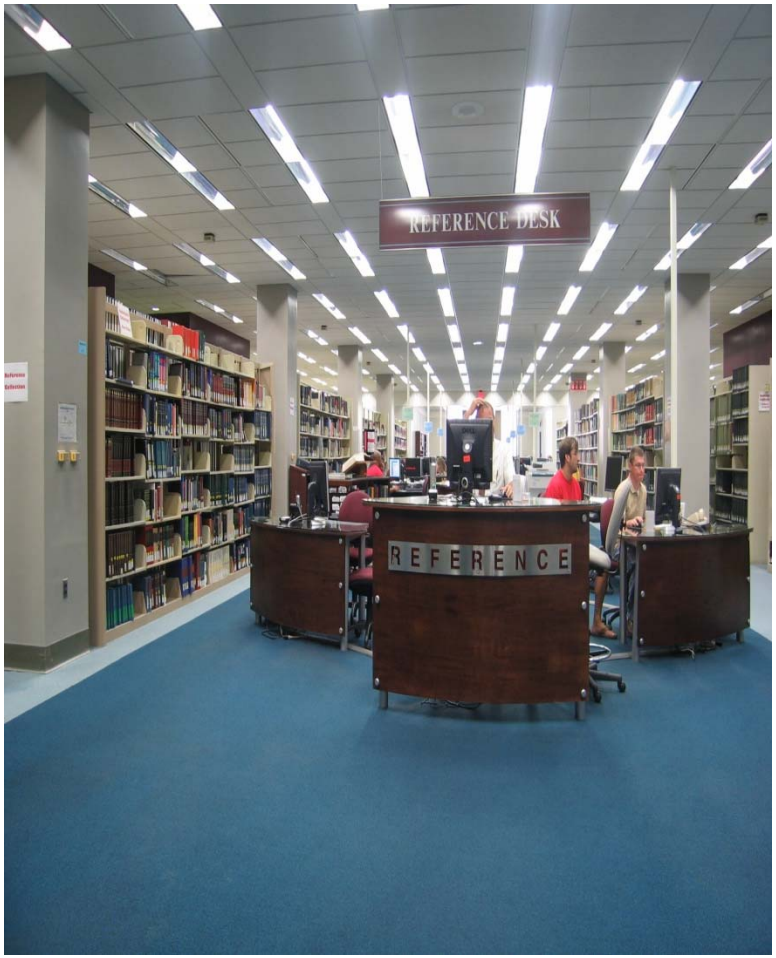
- 227 databases

www.lib.auburn.edu

Chat Reference Services

- At one Centralized Reference Desk
- Started Chat Reference in Sept. 2000
- Open to Students, Staff, Faculty
- No Authentication, Open to Public
- Publicity to Freshman Classes & Library Instruction Classes

Chat Reference Services



- At one Centralized Reference Desk
- Started Chat Reference in Sept. 2000
- Open to Students, Staff, Faculty
- No Authentication, Open to Public
- Publicity to Freshman Classes & Library Instruction Classes

InfoChat Features

- Uses HumanClick ™ Chat Software
- InfoChat Service is a Text-based Chat System
- Features Automatic Archiving
- Canned Message Options
- Sharing Files

Chat Reference Study

- Analyze Chat Transcripts
- Baseline Chat Analysis in 2001
- Quantity of Chat Sessions
- Directional versus Reference Questions
- Successful Reference Questions
- Causes of Unsuccessful Questions

Chat Reference Study

- 1516 Chat Sessions were Analyzed
- From April-December 2011
- Chat < 5% of Total Reference Questions
- 266 Total Reference Questions/Day

Chat Reference Study Findings

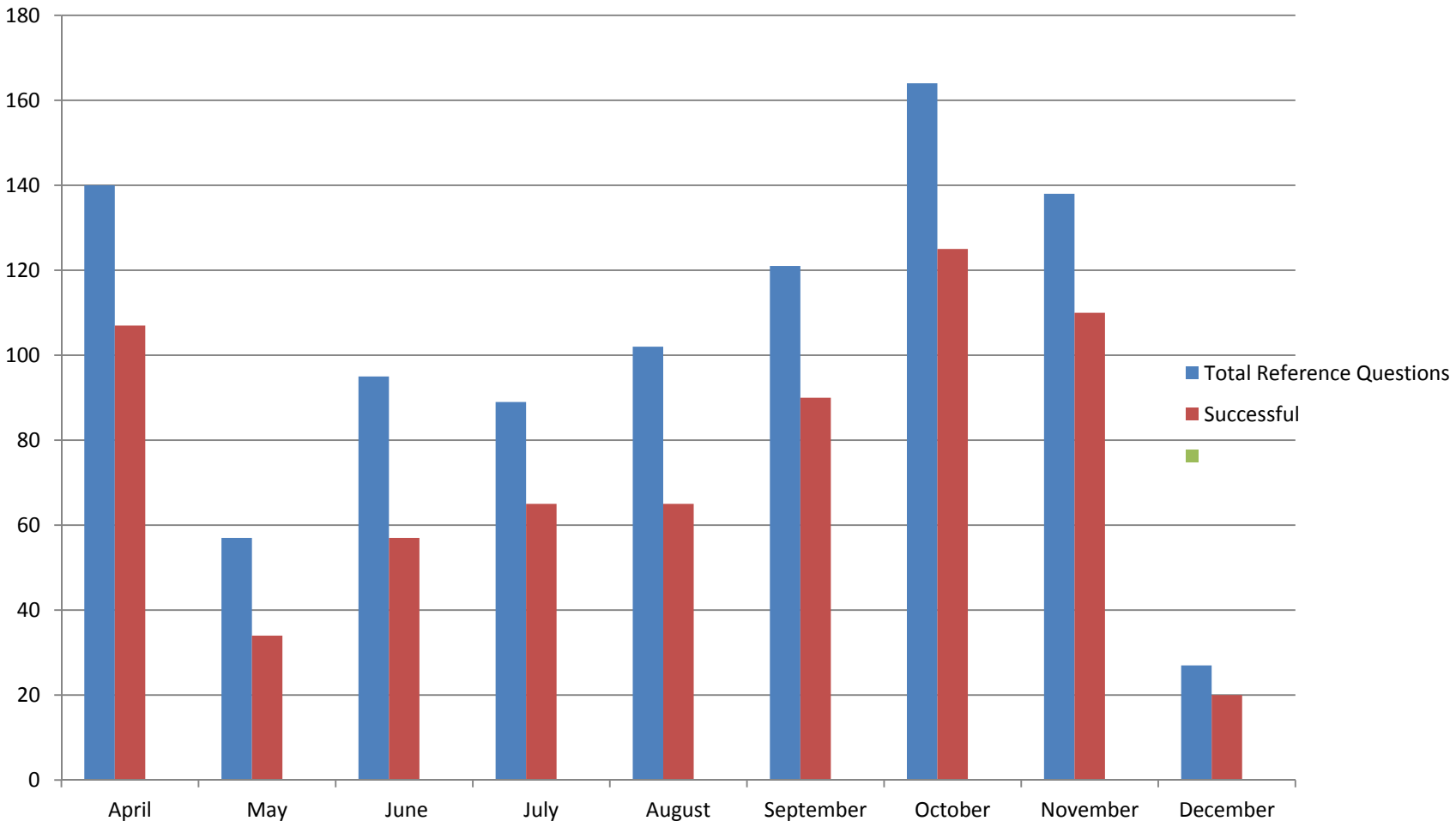
Number of Chat Sessions, April –December 2011

Month 2011	Directional & Informational	Reference Questions	Disconnects	Total
April	48	140	13	201
May	41	57	14	112
June	49	95	16	160
July	37	89	18	144
August	49	102	28	179
September	65	121	37	223
October	63	164	31	258
November	38	138	17	193
December	13	27	6	46
Total	403 (30%)	933 (70%)	180	1516

Chat Reference Questions

Month	Successful	Unsuccessful	Total
April	107	33	140
May	34	23	57
June	57	38	95
July	65	24	89
August	65	37	102
September	90	31	121
October	125	39	164
November	110	28	138
December	20	7	27
Total	673 (72%)	260(28%)	933

Chat Reference Questions



Unsuccessful Reference Questions

Causes

- Collection Lack:
  - Journal Gaps
  - Textbooks
  - Dissertations & Theses
  - Embargoes to e-journals
- Poor Reference Interview/Transaction
- Difficult Questions
- Lack of Subject Expertise
- Technology & Technical Problems
- Unrealistic User Expectations
  - Access to e-books, e-journal

Chat Reference Observations

- 72% Successfully Answered
- High Failed Reference Due to Collections
- 70% of Chat Questions are Reference
- High % Known-Item Searches
- High % Policy & Procedure Directional Questions
- Promotion of Service to Increase Usage
  - Useful to Distance Education Students
  - Useful to Remote Students, Staff & Faculty

Recommendations

- Frequent Analysis of Chat Transactions
  - Once a Semester to Twice a Year
  - Use information to improve service, collections, technology
- Address Causes of Reference Failure
  - Add journal back issues, one-time purchases
  - Subject Librarians review book/journal/database requests in chat sessions against current and future programs of instruction, research or outreach.
- Periodic Cross-Training of Reference Staff/Faculty for Consistent Reference Service; to share expertise
- Study Application of RUSA Guidelines to Chat Service
  - Add canned message asking patron satisfaction
  - Add canned message asking what patron learned
- Study One-on-One Instruction in Chat Sessions
  - How often librarians engage in instruction or teaching

Recommendations

- Frequently Asked Questions
  - Add Canned Context-sensitive help for repeat questions
  - Add online instructional tutorials, e.g. journal title search
- Include Repeat Referrals on Chat
  - Circulation Desk, eg. For policy and procedures
  - Miller Writing Center, e.g. for citation help
- Reference Questions Increased 70% in 10 Years versus 2001 Benchmark Study
- Adding Subject Librarians' Expertise to Chats

Conclusions

- Chat Provides a Glimpse into Reference Transaction Process
- Understanding User Needs
- Understanding Research Interests
- Information Resources Used
- Current Information literacy Needs
- Library Staff/Faculty Training Needs
- Subject and Searching Expertise of Librarians

Thank You

Questions?

Claudine Jenda
Science Librarian
Auburn University Libraries
Auburn, AL 36830
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Participatory Strategies and Mechanisms for Disseminating Agricultural Technologies for Increased Agricultural Productivity through Regional Focus: The Experiences from EAAPP

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What is EAAPP?

- The Eastern Africa Agricultural Productivity Program (EAAPP) is implemented by 4 Eastern African countries.
- Embeds 4 regional projects namely Regional Centers of Excellency (RCoEs) for wheat, diary, rice and cassava which are hosted in **Ethiopia**, **Kenya**, **Tanzania** and **Uganda** respectively.
- The four projects get support from the International Development Association (IDA).
- ASARECA facilitates regional initiatives.

Objectives of EAAPP

- Contribute to the objectives of the Comprehensive Africa Agriculture Productivity Program (CAADP)'s Pillar IV (improving agricultural research systems to support dissemination of new technologies).
  - enhance sustainable agricultural productivity and market competitiveness in the sub-regional agricultural system
- Strengthen and scale up regional cooperation in technology generation, training and dissemination for regional priority commodities through RCoEs:
  - EAAPP supports efforts to scale up and develop national research programs into RCoEs; these will take leading roles in technology generation, dissemination and training on a regional basis.
  - [e.g. facilitating increased transfer of rice technology, information and knowledge across four countries.]

EAAPP Partners

ASARECA

Transforming Agriculture
for Improved Livelihoods

The World Bank

EAAPP & RCoEs

- Each designated RCoE focuses on addressing constraints along the value chain of a particular commodity to serve for the national and regional social and economic growth.
- The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) coordinates regional initiatives while specific commodity centers of excellence coordinate project activities.
- A multi-institutional approach is employed through RCoEs focusing on investing in agricultural research and development covering four **key components**.

More on RCoEs

- An RCoE under EAAPP is a leading agricultural technology program/center that has established research, dissemination and training capacity that distinguishes it as a leader in the region and beyond.
- RCoEs have both regional and national mandates in undertaking the following responsibilities:
  - Spearheading the application of cutting-edge science for improving the livelihoods and food security needs of smallholder farmers and low income segments of the population;
  - Engaging in agricultural research and development of four selected commodities: cassava (Uganda), dairy (Kenya), rice (Tanzania) and wheat (Ethiopia).
  - Through their host countries, RCoEs are playing leading roles in establishing networks of research and development linkages.
  - Technologies developed on various commodities through the RCoEs will be replicated in the whole region because national priorities have proven to have potential for regional spillovers.

Components of EAAPP

COMPONENT 1: **Strengthening Regional Centers of Excellence and their commodities in terms of**

- **physical facilities**
- **human resources**

COMPONENT 2: **Technology Generation, Training and Dissemination**

- **SUB COMPONENT 2.1: TECHNOLOGY Generation**
  - *Developing and promoting demand-driven varieties/breeds*

- **SUB COMPONENT 2.2: Technology Dissemination & Training**
  - *Training and dissemination*
  - *Using participatory strategies and mechanisms to train extension staff and farmers in the latest innovations and to scale up application of technologies.*

Components of EAAPP...cont.

COMPONENT 3: **Improved availability of seeds and breeds:**

- Supporting multiplication and distribution of improved seed and breeds, seed business development and harmonization of seed polices and regulations.
- Supporting seed quality control activities.
- Enhancing capacity for multiplication and distribution of improved seeds and breeds.
- Supporting business development.

Components of EAAPP...cont.

COMPONENT 4: Project Coordination and Management:

- Project management at National levels.
- Regional project activities through ASARECA.

Regional Implementation Mechanisms of EAAPP

- EAAPP implementation is based on partnerships and collaboration among participating countries:
  - undertaking joint technology generation activities.
  - dissemination and training activities.
  - coordinating respective national activities among partner countries in order to achieve a shared regional objective.
  - sharing knowledge and technological outputs from national programs throughout the region.
- EAAPP implementation relies on existing regional platforms, networks and partnerships to share information and create opportunities for collaboration.

Regional Implementation Mechanisms of EAAPP

- Research, training and dissemination activities are funded through sub-grants and implemented regionally.
- Each RCoE works with ASARECA in coordinating regional activities associated with RCoE's program of activities.
- ASARECA's key roles: networking, capacity building, technical backstopping, monitoring and evaluation, and regional coordination

Technology Dissemination and Training

- The sub-component uses participatory strategies and mechanisms to
  - train researchers, extension staff and farmers in the latest and improved innovations.
  - scale-up application of technologies and practices concerning all four commodities supported under EAAPP
  - create partnerships with a range of institutions regionally, both public and private to facilitate the dissemination and adoption of available technologies.
- Training and dissemination (T&D) activities are funded through sub-grants and implemented in the context of sub-projects.

T&D Activities

Key elements: documentation, publication and dissemination of the approaches, processes and outcomes of the EAAPP; focusing on:

- Ensuring increased availability & access to information on improved technologies.
- Strengthening the capacity of the agric. advisory services with necessary skills.
- Strengthening linkages among research, extension and end users to ensure development of appropriate technologies.
- Establishing a regional platform for exchange/share knowledge & experiences in scaling-up agric. Innovations.

T&D Activities

Extension approaches and dissemination methods currently used:

- **FFS Approach**: is used throughout the country being incorporated within DADPs.
- **Farmer-to-Farmer Approach:** Deliberate efforts have been made to train farmers who can train other farmers.
- **Dissemination Methods**: demonstrations/trials, Field days/exchange visits, Publications; Video episodes/Films; websites, CD-ROMS; workshops, conferences; agricultural shows/exhibitions, mini-libraries, and radio/TV programs.

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

The Case of Tanzania

- **The agricultural extension approach is demand-driven, involving farmer groups in planning and implementing processes [**dissemination/uptake pathways**].**
- **The system integrates different extension providers, allowing room for pluralistic extension approaches, thus,**
- **Empowering farmers organizationally and financially so that they demand for appropriate services.**
- **In implementing EAAPP, a combination of technology dissemination pathways and approaches are used.**

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

The Case of Tanzania ...cont.

- Inventory of technologies
- Baseline survey & training needs assessment
- Training of trainers on improved technologies
- Rice stakeholders analysis
- Training of stakeholders on improved and new technologies
- Development of training manuals
- Development of mass media products and extension packages

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

The Case of Tanzania ...cont.

- Establishment of farmer processor groups.
- Formation of rice stakeholder platforms.
- Documenting and exchanging rice information via website development.
- EAAPP-RRCoE Communications strategy.
- Establishment of FSS/demonstration plots.
- Annual agricultural shows/exhibitions.
- Farmer participation in development planning activities and CORDEMA.

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

The Case of Tanzania ...cont.

- Exchange visits/study tours.
- Improvement of indigenous cattle using exotic bulls.
- Use of hay box to handle crop residues (maize stover and bean straws.
- **Farmer** training centers/FEU/ZIELU/WARCs
- Research activities in ARIs and training sessions in MATIs.

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

Key Accomplishments

- 12 technology uptake pathways developed and implemented: Inventory of technologies, publications, Radio/TV programs, regional exchange visits, RRCoE web-site, RRCoE communication strategy, exhibitions, agricultural shows, meetings, demonstration plots & national rice stakeholder platforms.
- Inventories of 41 technologies of the four commodities: 17 rice, 9 wheat, 7 cassava, 8 dairy.
- Production of four training manuals (rice, wheat, cassava & processor groups) currently used in training farmers & extension staff.

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

Key Accomplishments .. Cont.

- Six study visits made to other RCoEs (RDCoE in Kenya and RCCoE in Uganda): 9 researchers & extension staff; 47 farmers (33 men and 14 women).
- Twelve rice platforms formed:
  - 2 of them that were formed in Igunga and Kilombero districts have managed to open bank accounts for platform issues.
  - In Kyela District, one platform participated effectively in preparing District Agricultural Development Plans (DADPs) for 2012/13.
- Seven rice processor groups have been formed and strengthened -- one of them has advanced to the extent that it has started grading, packaging and labeling rice (their rice brand: *Mchele Safi wa CHAURU)*.

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

Key Accomplishments .. Cont.

- Capacity building of various stakeholders along the value chain (rice, wheat, cassava, dairy) 463 extension staff (332 men & 131 women) and 1086 farmers (704 men and 382 women).
- The trained extension officers and farmers demonstrate to other farmers in the project participating districts the use of new improved technologies and we have success stories.
- Establishment of 90 rice demonstration plots.

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

Popular Products/Outputs

- Two issues of Kiswahili RRCoE magazines.
- A Booklet on *'Kilimo Bora cha Mpunga wa Mabondeni' (Lowland rice production).*
- RRCoE brochure, leaflets and posters
- Cinema show sessions in villages (audience: 8,000).
- Airing 42 radio programs (23 rice, six cassava, one wheat, 12 dairy); & 11 TV programs including a video episode about introduction of RRCOE.
- Two exhibitions involving 4,960 stakeholders along commodity value chains.
- RRCoE-EAAPP website: http://www.erails.net/TZ/rrcoe-eaapp/rrcoe-eaapp-tanzania/
- Rice and dairy success stories

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

Products/Outputs: Success Stories

A. DAIRY

- Ms. Feddy Tesha a Tanzanian dairy farmer and processor visited Kenya under EAAPP-RRCoE.
- Before the visit, she used to process and pack milk in low quality packing materials.
- After the visit, she learned and managed to use approved plastic bottles (more hygienic & presentable).
- She then influenced a Tanzanian firm to manufacture plastic bottles locally and mobilised other dairy farmers and to form a coop (Ilala Dairy Farmer Cooperative Society, IDACOS).

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

- Ms Tesha is earning more from her dairy farm than before her visit to Kenya.

Read this story at: http://www.erails.net/images/tanzania/rrcoe-eaapp/rrcoe-eaapp-tanzania/files/EAAPP-Tz%20Dairy%20Success%20Story%202013-r.pdf

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

Products/Outputs: Success Stories: DAIRY

Hygienically processed and packed milk ready for sale at Ms Tesha's milk processing plant, PROFATE

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

B. Rice Success Story

- A rice farmers' group in Nyatwali Irrigation scheme has 109 members (60 men and 49 women).
- Before EAAPP intervention they harvested less than 9 bags of paddy per acre (about 0.8t/ha) and majority were fishermen.

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

Rice Success Story

Two years of EAAPP Implementation:

- The fishermen have converted to paddy farmers.
- Paddy production has increased to 25-40 bags per acre (2.7-4.1t/ha) as a result of adopting improved technologies (improved variety, SARO 5; good management practices and 19 farmers practicing SRI which cuts water use for irrigating paddy fields by 40%).

EXPERIENCES IN TECHNOLOGY DISSEMINATION PATHWAYS

Rice Success Story

- As a result, farmers managed to build modern houses, send children to private schools, purchased livestock and farm implements, and, above all they are food secure.
- From the knowledge gained they train other farmers from other parts of the country.
- Have establish a credit society (SACCOS).

Future Outlook

What needs to be done

- Develop an Extension Master Plan that will guide the key stakeholders in dissemination of technologies
- Consolidate the achievements and out-scale to other areas including EAAPP partners & other ASARECA countries.
- Harmonize policies to accelerate cross-border technology exchange.
- Strengthen and support farmer training centers (Mkindo FTC, KATC) to accommodate more farmers from participating countries
- Use innovation systems approaches to scale-up the application and adoption of technologies e.g. use of ICTs, including phones & retooling WARCs

Future Outlook

What needs to be done

- Empowering farmers groups to ‘own’ technologies & enhance agribusiness skills and market information.
- Strengthen and enhance use of youth FFS/demonstration plots and beyond.
- Emphasis on exchange visits and farmer field days
- Enhance use of AI and pasture seed dissemination
- Support farmers with input mini-packs particularly in youth FFS.

EAAPP-RRCoE Resources

URL

<http://www.erails.net/TZ/rrcoe-eaapp/rrcoe-eaapp-tanzania/>

EAAPP-Tz Key documents

<http://www.erails.net/TZ/rrcoe-eaapp/rrcoe-eaapp-tanzania/rrcoes-key-documents/>

IAALD World Congress

Emerging Priorities for Scientific & Agricultural Information

22nd to 25th July 2013
Cornell University in Ithaca, New York State, USA

Innovation in Extension Services for improved farmer Access to Agricultural Information in Uganda

Patrick Kasangaki

Rural Empowerment Network (REN)

Presentation Layout

Introduction

Objectives

Geographical Coverage

The Approach

The Tools

Outputs

Impact

Conclusions and Recommendations

Introduction…

In Uganda currently, public sector rural advisory services (RAS are underfunded and underperforming, reaching only a fraction of farmers;

NGOs and the private sector are only partly filling the gap.

Farmers therefore tend to rely on informal channels of RAS, in particular their peers.

There are gaps to fill in order to strengthen the RAS, for example through:

- Appropriate policy advocacy
- Capacity development support and
- Application of more efficient and proactive approaches such as the QAS VS (Information service to an extension approach)
- In 2008 CTA and REN started implementing a QAS VS approach

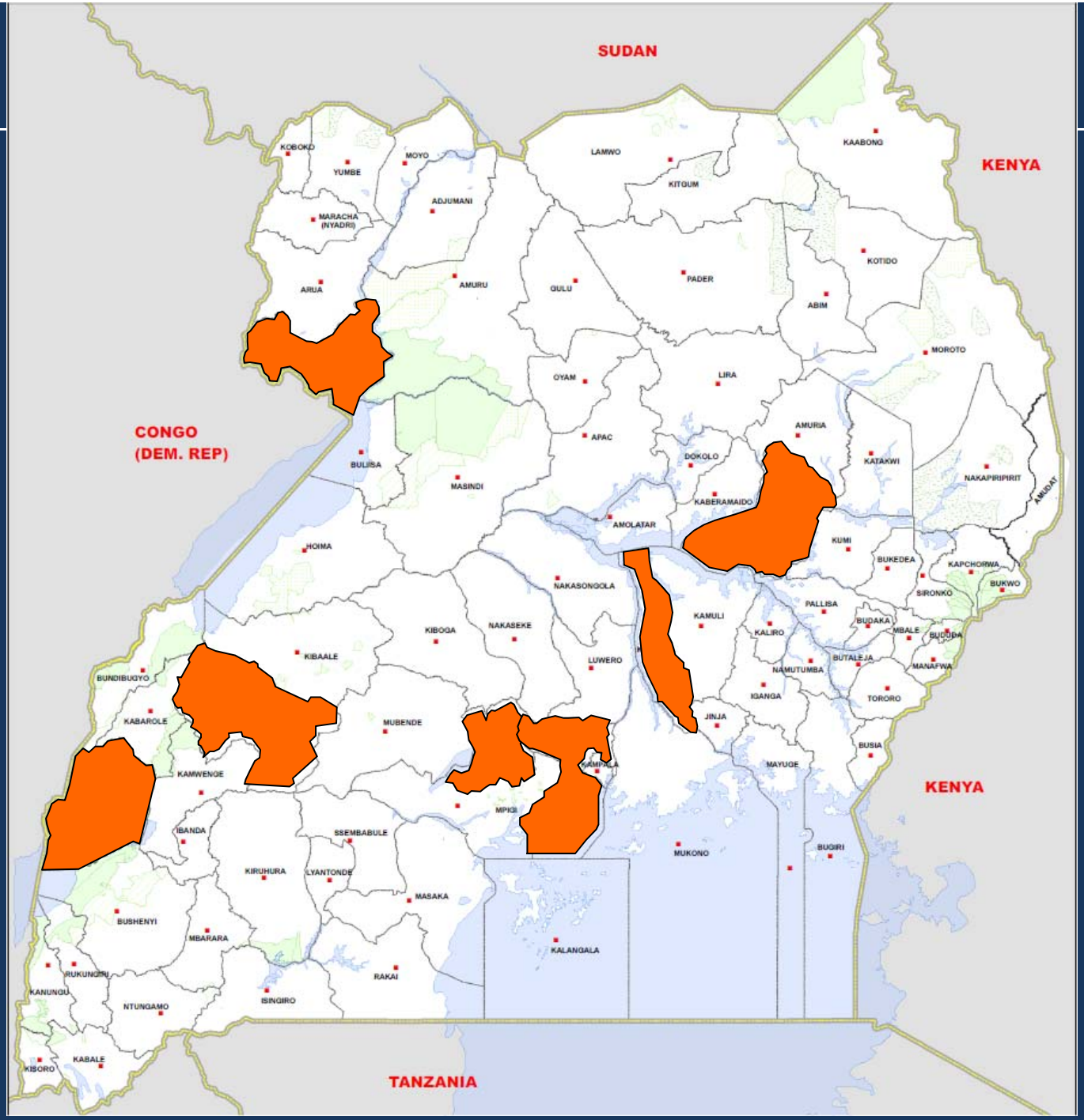
Objectives of the QAS VS approach in Uganda

- To provide Timely and accurate responses to farmers' questions on best practices.
- To mobilise existing agricultural expertise in order to improve agricultural productivity, food security and rural livelihoods in Uganda.
- To make research outputs more usable by linking farmers and extension to research scientists.
- To generate online knowledge content and share it widely.
- To build rural agricultural information archives at the community level.
- To catalyse communication among farming communities for purposes of agricultural and rural development.

Geographical Coverage

- **900 small-scale farmers in 7 Districts namely:**

- **Kayunga, Soroti, Wakiso, Mityana, Kyenjojo, Kasese, and Nebbi.**


SUDAN
KENYA
CONGO
(DEM. REP)
TANZANIA
KENYA
KOBOKO
YUMBE
MOYO
ADJUMANI
MARACHA
(NYADRI)
ARUA
AMURU
GULU
LAMWO
KITGUM
KAABONG
PADER
KOTIDO
ABIM
MOROTO
LIRA
OYAM
APAC
AMURIA
DOKOLO
KATAKWI
NAKAPIRIPIRIT
AMUDAT
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MASINDI
KABERAMAIDO
AMOLATAR
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BUKWO
SIRONKO
HOIMA
NAKASONGOLA
PALLISA
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BUDAKA
KALIRO
MBALE
BUDUDA
KIBOGA
NAKASEKE
KIBAALE
LUWERO
BUTALEJA
NAMUTUMBA
MANAFWA
BUNDIBUGYO
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BUSHENYI
MBARARA
KALANGALA
RUKUNGIRI
RAKAI
KANUNGU
ISINGIRO
NTUNGAMO
KISORO
KABALE

The Tools

- Information Request forms (Vouchers)
- Digital Cameras
- Computers
- The Internet
- Radio

FARMER INFORMATION REQUEST FORM

1. Date of Request:	2. Name of Farmer:
3. Postal Address of Farmer:	4. Village, Parish, and Sub-county:
5. What are Your Main Agricultural Activities?	
6. Short Description of the Problem:	
7. Farmer Question: Simple and Precise.	
8. In what Language do you Prefer the Answer?	
9. What Did You Do to Try Solving the Problem?	

10. Do others have the Same Problem?	No		Some		Many			
11. Thematic Scope	Crop Production		Animal Production		Agro-Processing		Marketing	
12. Age of Client	Below 20		20 To 30		30 To 40		Above 40	
13. Gender	Male		Female					
14. User Category	Subsistence Farmer				Commercial Farmer			
15. Are you Affiliated to an Organisation?	No		Yes					
16. Name of Farmer Organisation					17. Number of Group Members			
18. Is the Request Submitted by an Individual or Group?	Individual				Group			

Please use the back of the Form for Additional Information and Comments


REN

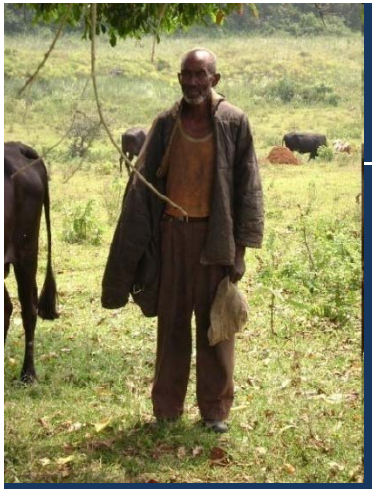
The QAS VS Approach

- Voucher is handed out to a farmer or a farmer group by a field agent (FA - Farmer and lives among them) (Demand driven).
- Farmer's information request is published on the Internet at the project website www.erails.net/UG/ren/qas-2009 by the Rural Information Broker (RIB).
- The Answer Service (AS) approaches an expert (EX) on the subject matter, contacts other information sources and the Internet to formulate an appropriate farmer answer and publishes it on the website.
- The RIB prints the answer and links up with the FA who makes a timely delivery to the farmer who also evaluates it.

The QAS VS Approach....

- The evaluation is published on the website.
- Meanwhile the Controlling Agent (CA) follows all the different stages regarding the information request and pays all actors once the farmer positively evaluates the answer.
- All questions and their answers are archived among the farming communities.
- The most frequently asked questions (FAQ's) are compiled into radio programmes.
- Radio recordings are distributed to farmer groups for purposes of information sharing and continued learning.

The QAS-VS……



AGRICULTURAL RESEARCH INFORMATION SYSTEM
(ARIS)

Farmer request

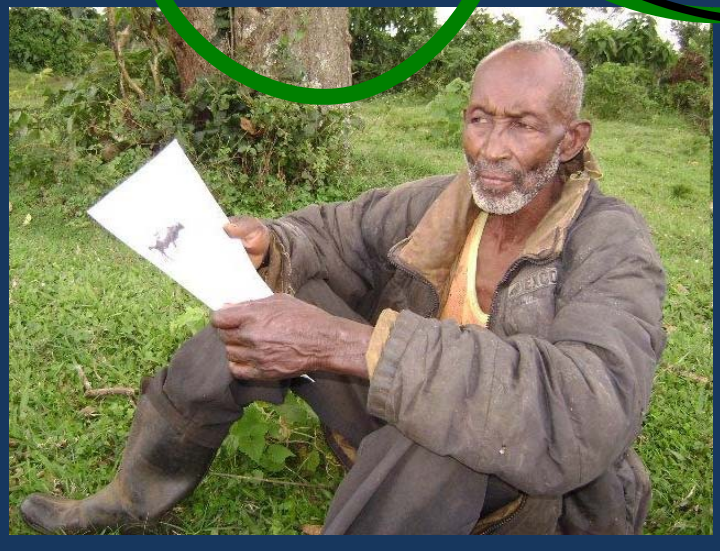
Field agent

Internet

www.erails.net/UG/ren/qas-2009

Answer service

Expert response



Payment after delivery

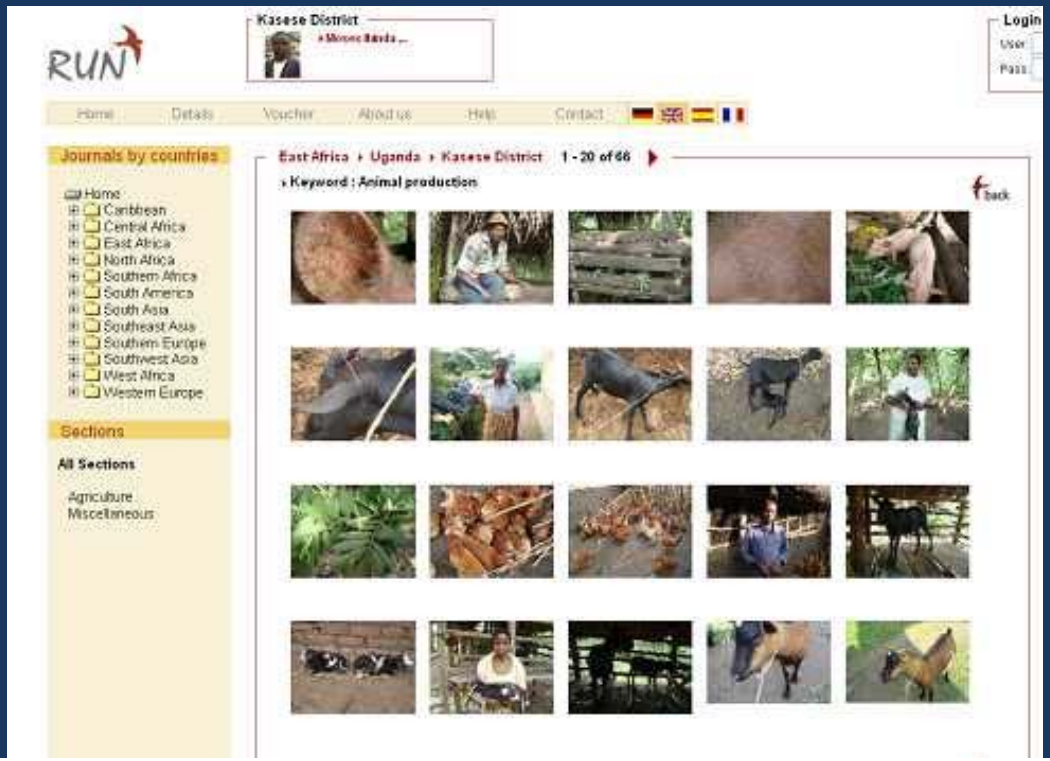
!

Library

Internet

Outputs

- **The QAS VS was introduced to 40 local authorities and 900 farmers.**
- **15 Field Agents were trained.**
- **900 different questions and their answers were published online at www.runetwork.org | www.erails.net/UG/ren/qas-2009**



Outputs

A database of 35 subject matter specialists developed.

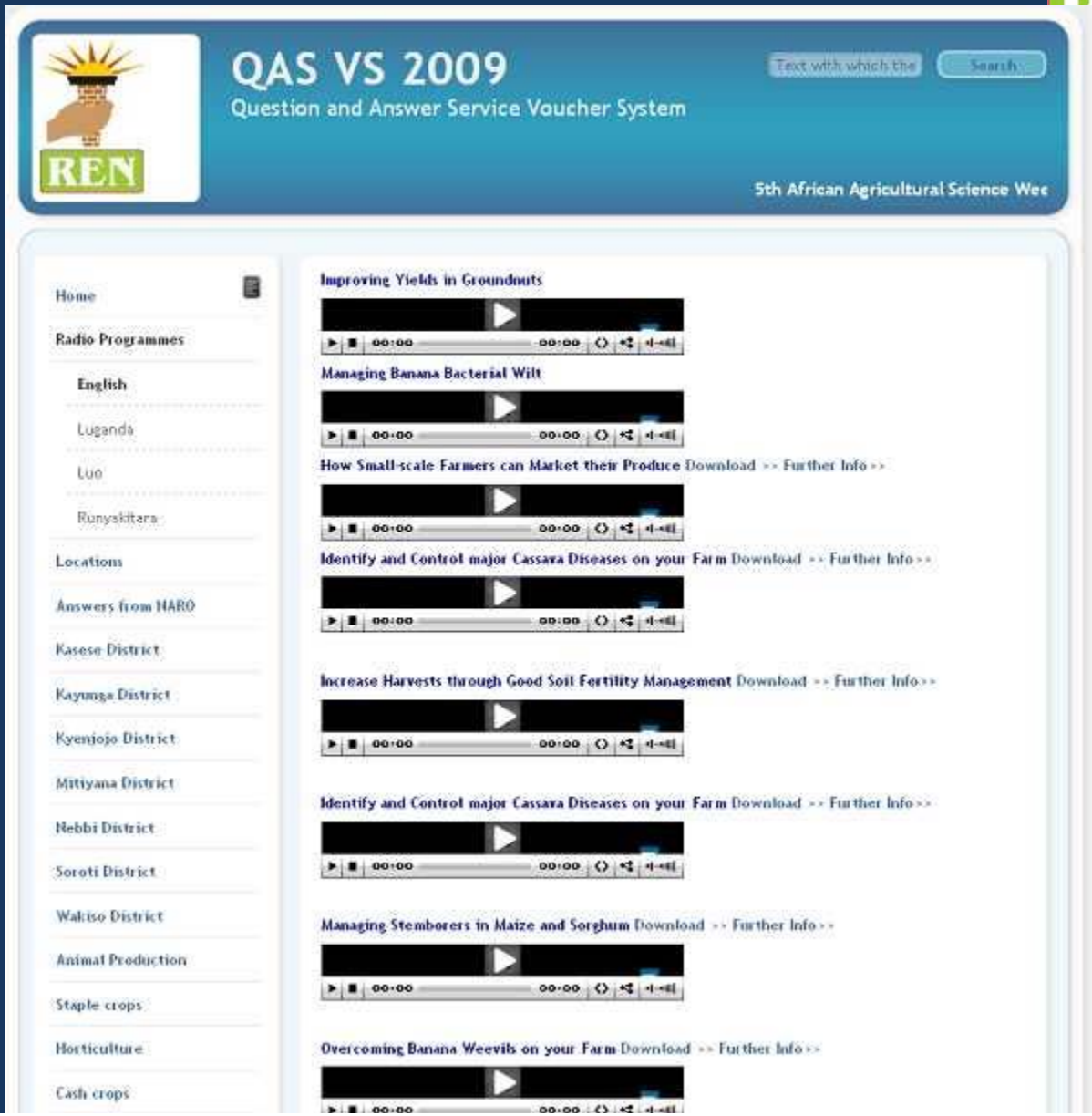
Existing expertise was mobilised. (>70 people)

900 Questions and Answers are archived at 15 sites in the communities.

Outputs

Increased outreach through the broadcasting of 72 radio programmes.

744 recordings were distributed to listening groups at 15 sites in the farming communities



Impact

To measure impact of the approach:

- A structured questionnaire was used to interview 550 randomly sampled farmers who participated in the project in order to gather data and information to show the extent to which the project had improved their farm production.

- A statistical package SPSS was used for data analysis.

Impact….

Effect on Productivity by enterprise

Increase in Productivity (%)	< 0	0-25	26-50	51-75	76-99	100	> 100	TOTAL
Crop Production	18	56	74	234	93	63	12	550
Animal Production	9	37	39	131	50	38	8	312
Aquaculture	0	2	5	12	8	2	0	29

Impact….

Increased Engagement by Theme (%)

Theme	< 0	0-25	26-50	51-75	76-99	100	> 100	TOTAL
Marketing	18	55	220	81	110	55	11	**550**
Post Harvest Processing	25	37	231	48	125	44	50	**550**
Pest Control	12	73	209	117	62	59	18	**550**

The way forward

- **REN in collaboration with FARA is currently up-scaling the approach in the northern Uganda district of Apac.**

- **FARA is also currently up-scaling the approach to fourteen African countries.**

Conclusions and Recommendations

- **The QAS VS is an effective method of providing information services to farmers. (There was a significant improvement on farmer productivity).**

- **The QAS VS was developed primarily as an information service but has proved to be an effective extension approach.**

- **It is also recognized that no single extension approach can meet all of the complex agricultural challenges of Africa – decisive action is needed across a wide front including the QAS VS which has shown itself to be an effective method of meeting actual expressed information needs of farmers.**

Conclusions and Recommendations.

- The QAS VS is not as expensive as other extension approaches as it relies upon and uses existing structures in the communities it serves as well as some of the human resources it needs such as FAs and RIBs.
- Different countries are thus urged to consider using the QAS VS as one of its approaches to extension services.
- Development partners should embrace and continue supporting the QAS VS approach.
- Maintaining transparency and accountability to stakeholders has been identified as a key element in improving the performance of decentralized agricultural extension systems. If decentralization is to work, agricultural extension workers must be accountable to those who benefit from their services and to those agencies that fund these programs.


THANK YOU

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T. Michael Weah, Director, We Care Library, Monrovia, Liberia

IAALD Conference, Cornell University, July 2013

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energy
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M-Libraries
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Major
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LIBERIA
SIERRA LEONE
GUINEA
CÔTE D'IVOIRE
ATLANTIC OCEAN
Guéckédou
Mendekoma
Voinjama
Kailahun
Buedu
Kolahun
Irié
Pendembu
Vahun
Mt. Wuteve
Zigida
Kenema
Yella
Zorzor
Nzérékoré
Lofa
Wologizi Range
Wonegizi Range
Yekepa
Mt. Gletoh
Mt. Nimba
Saniquellie
Danané
Kahnple
Kongo
Wiesua
Belle Yella
Gbange
Belefuanai
Gahnpa (Ganta)
Sulima
Bendaja
Gbarpolu
Bopolu
Grand Cape Mount
Bo
Gbarnga
Palala
Kpein
Sagleipie
Suakoko
Tubmanburg
Zienzu
Bong
Yela
Nimba
Butlo
Robertsport
Lake Piso
Bong Town
Bomi
Klay
Zekera
Kpeaple
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Guiglo
Margibi
Kareysburg
Kakata
Tapeta
Brewerville
Grand Bassa
Gboyi
Tobli
Kola (Kola Town)
Monrovia
Montserrado
Harbel
Marshall
Guata
Poabli
Towabli (Towa Town)
Debli
Tchieni (Zwedru)
Hartford
Babu
Taï
Edina
Buchanan
Trade Town
River Cess
Ghapo
Grand Gedeh
Drubo (Dubwe)
Gonglee
Galio
Duabo
Timbo
Bokoa
Pelohehn
River Cess
Shabli
Yakakahn
Yibuke (Kadbli)
Juazohn
Sinoe
River Gee
Kopo
Fish Town
Sehnkwehn
Tiehnpo
Greenville
Tatuke
Tawake
Kodeke
Grand Kru
Maryland
Nyaake
Nana Kru
Barclayville
Sasstown
Nemeke
Grand Cess
Pilbo
Tabou
C. Palmas
Harper
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county border
national border
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national capital
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2000 m
3000 m
4000 m
5000 m
12°
11°
10°
9°
8°
7°
8°
7°
6°
5°

“Education is the most powerful weapon you can use to change the world.”

-- Nelson Mandela

DISCUSSION POINTS

1. Focus on Liberia Challenges and Realities and Use of Knowledge Ecology Techniques
2. Resources Available and Technology
3. Libraries: The Missing Link
4. Opportunities to Make a Difference

Focus on Liberia: Needs

- Destructive civil war ended 2004
- **90% food insecure**
- 57% literacy rate (43% for women)
- 40% of West Africa's original Guinea rain forest
- 70% GDP is Agriculture (80% workforce are women)
- 25% have access to safe drinking water
- 36% have access to proper sanitation
- Lack of electricity – hydroelectric plants destroyed
- Biodiversity and Endangered Species, Pygmy Hippo
- **Rich resources: Rubber, GOLD, Diamonds, Oil?**

» **Photo from pygmyhippofoundation.org**

Aid and Corruption Realities

- Concessions to businesses such as gold mining that are destructive to the environment.
- Under the table timber concessions.
- Lack of funding for education.
- Middle organizations and overhead!!!!
- Smaller organizations and social entrepreneurs demonstrate success at much lower costs.

Major Divides in Liberia

- **Gender Divides** – women grow 80-90% of food but have greatest illiteracy and lack of education, Lucky to go beyond second grade. Most teachers have 5th-6th grade education
- **Digital Divides** still exist in Africa: only 26% know what the Internet is and less than 10% use it
- **Mobile Divides** – Diminishing: cellphones are prevalent but lack of smartphones, tablets, computers
- **Environmental Divides** – Agribusiness, Slash and Burn Agriculture, Industry vs. Liberia's Pristine Rainforests
- **Learning Divides** – Urban vs. Rural, Lack of Education, Lack of Libraries and a reading culture

KNOWLEDGE ECOLOGY TO FOCUS ON ISSUES

- Uses a variety of tools/strategies rather than a single system.
- May or may not have a clear idea of where you are headed.
- Follow the energy. Watch where the energy in the system is.
- Be strategically tactical.
- Obsessively interested, persistent, enthusiastic.
- Build knowledge networks of people who care.
- Notice everything that happens and consider why.
- Tell great stories about what you observe.

(Adapted from Euan Semple, June 28, 2011 blog post and others)

Millions of $$ of Research Content Available

- **Research4Life**: HINARI, AGORA, OARE, ARDI, free to World Bank Level 1 Countries

- **INASP** – International Network for the Availability of Scientific Publications, UK Charity to begin work in Liberia in 2014
  - More publishers
  - Capacity building through training, supporting publishing by faculty, promoting libraries

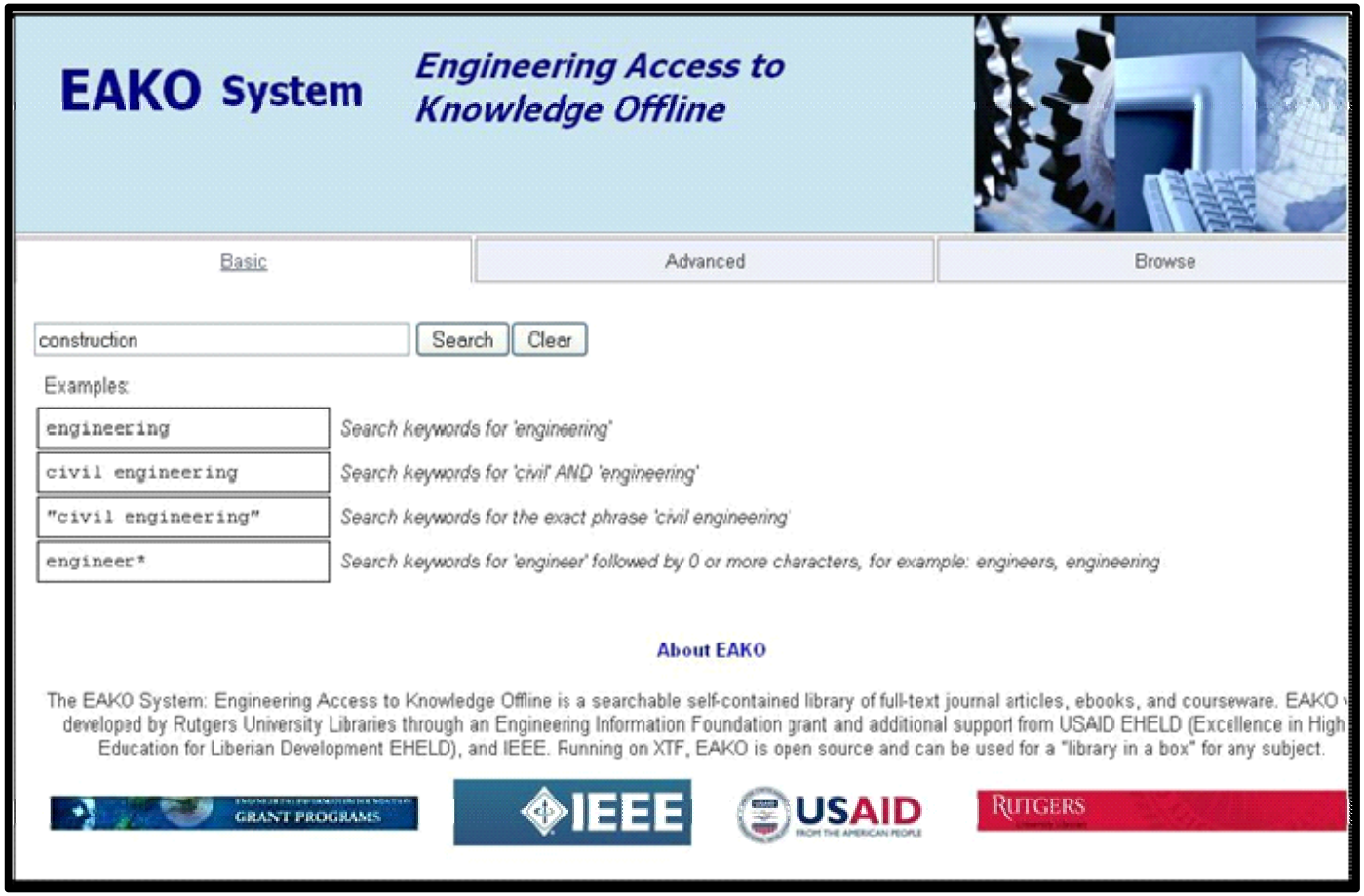
- **Offline Resources: TEEAL and EAKO**

NOTE: Rutgers University Libraries have been instrumental in bringing these resources to Liberian Universities.

EAKO System:

Engineering Access to Knowledge Offline

A Library in a Box by Rutgers University Libraries, funded by grants from the Engineering Information Foundation and donations from IEEE Based on XTF from California Digital Library. EAKO is adaptable to other subject domains.



Technology Trends Worldwide

- **More Mobile**
- More free access to information “open science” “open data” “open education resources”
- Cheaper devices – big drops in smartphones, laptops, tablets, ebook readers, $15 wiki readers
- More social – Conversations, Twitter, Facebook,
- More access to learning, Greater ease of use
- **BUT** requires literacy and Internet

Mobile IS the Next Frontier for Liberia

"People in Fiji would rather go without water to have a mobile phone" "Mobile devices bring with them the feelings of quality, relevance and Stability" (Ela Volatabu, Librarian, University of the South Pacific, Fiji, M-Libraries 2011 Conference, Brisbane, Australia)

"Mobile devices are the single most transformative technology for development in Africa" (Jessica Colaco, IHUB, Kenya. M-Libraries 2011 Conference, Brisbane, Australia)

"Africa has the highest growth rate of mobile phones in the world"
"Africa is book poor but cellphone rich" (Denise Nicholson, University of Witwatersand, South Africa. M-Libraries 2011 Conference, Brisbane, Australia)

"By the year 2015, the mobile network will break the electricity barrier in more than four major regions. Sub-Saharan Africa will have more people with mobile network access than with access to electricity at home." (Cisco, 2011)

Image from stitcher.com

Mobile Apps in Africa – Agriculture Examples

- **FarmPAD (Tap Logic).** Allows users to enter farm records, equipment service logs, spray records and take notes or pictures. You can also draw field boundaries with GPS or by hand.
- **Mobile Crop Disease Surveillance** by Makerere University Students in Uganda. The app uses camera images to diagnose viral damage and puts survey information online in real time.
- **iCow**, From Kenya for dairy farmers. It acts as a virtual veterinary nurse and midwife for subscribers, giving advice on gestation, milk production and fodder.

- **FAO Forestry** full text documents including some on food security
- **KACE-** Kenya Agricultural Commodity Exchange- Farmers send a text to get instant crop pricing.

"With peak data transfer speeds between 100 Mbps and 1 Gbps – faster than most consumers' landline Internet access today – **4G wireless** will reduce the digital divide between major urban centers and rural and developing parts of the world." Shuzo Kato, IEEE Fellow and inventor of the TDMA chipset (May 2011)

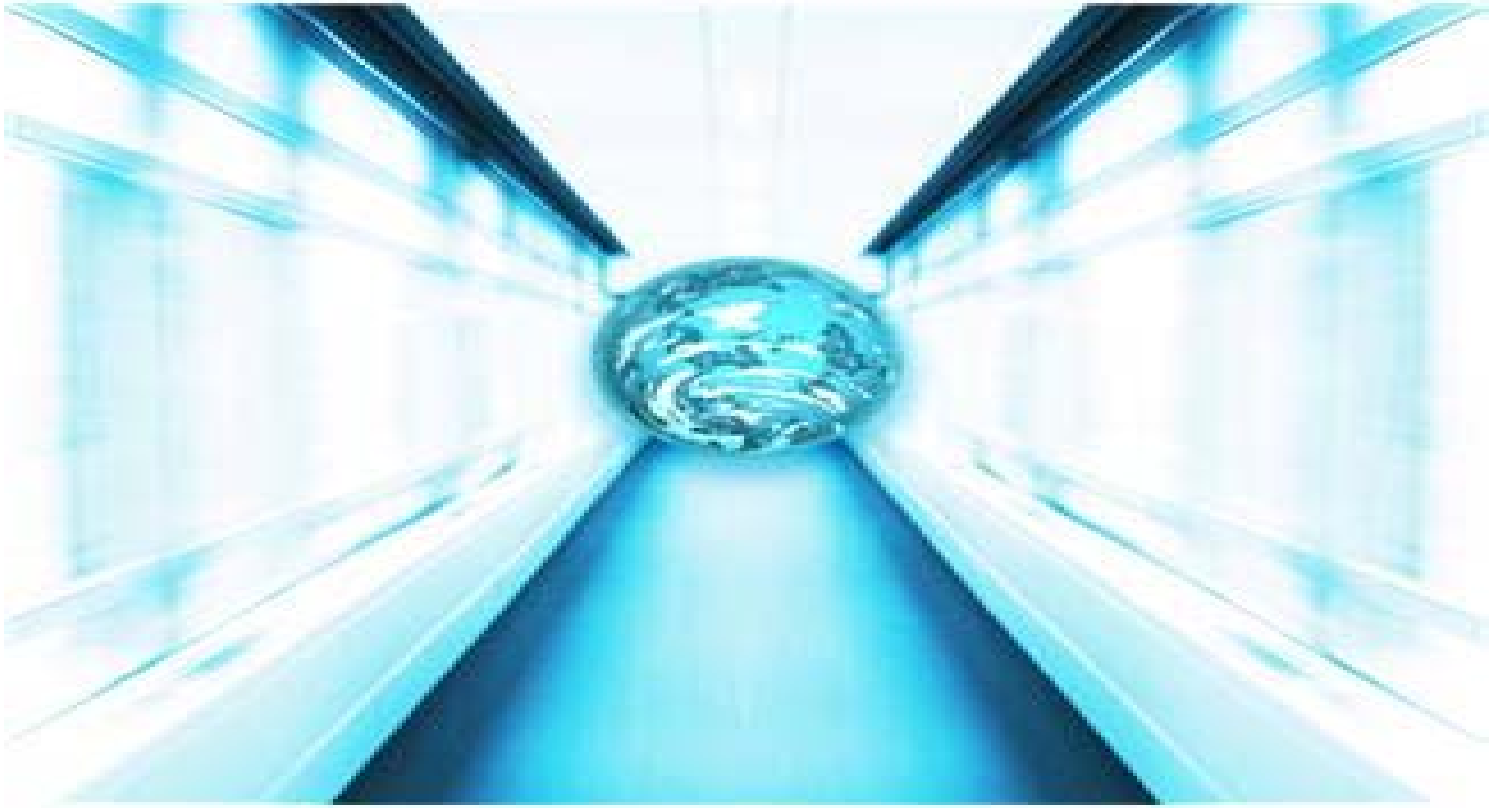


Image from http://office.microsoft.com

e-Agriculture.org

"**e-Agriculture is a global Community of Practice,** where people from all over the world exchange information, ideas, and resources related to the use of information and communication technologies (ICT) for sustainable agriculture and rural development"

"Our Mission is to serve as a **catalyst for institutions & individuals in agriculture and rural development to share knowledge, learn from others,** and improve decision making about the vital role of ICTs to empower rural communities, improve rural livelihoods, and build sustainable agriculture and food security".

Information, Training & Capacity in Liberia: Libraries are the Missing Link!

- Millions of $$ of Content
- Major information needs for researchers, public, agriculture workers, industry
- The technology is now there
- **But, where are the libraries and librarians?**

- **Librarians bring people together with information and with people with information**

Libraries are the Missing Link

- Very rare in rural communities, some by Peace Corps volunteers with no experience
- **Only one** public library in Monrovia
- **Only one** MLIS librarian with computer & Internet skills
- Library role is undefined, no public service, no collection oversight.
- Weak publishing industry and high $$ for books
- Reading culture is absent in most of the country.
- Many gift books are irrelevant (Book Aid Intl will not send books to Africa over 10 years old).

Library Potential, Just a beginning

- Liberian Library Association revived
- WE CARE Library, Monrovia – books, Internet, publishing – a role model of possibilities
- Focus now to train librarians for Liberia, possibly 2 MSLIS students.
- Work with extension/nursing/teachers to provide practical-oriented information

More Potential Building on Liberia Initiatives

- New Center for Excellence in Agriculture – Librarian embedded in the process.
- President Sirleaf-Johnson's National ICT Policy
- 2013 President announces plan for a National Library
- Ministry of Agriculture – decentralized
- University of Liberia – New university librarian, Opportunities to replace paraprofessional library program as a concentration added to any major.


CUTTINGTON
UNIVERSITY
CUTTINGTON UNIVERSITY
SANCTE ET SAPIENTE
FEBRUARY 22, 1889

Cuttington University College of Agriculture and Sustainable Development (CASD) Library Vision

The CASD Information Resource Center (CIRC) will become the leader in agriculture information in Liberia by providing access to the world's research available via full-text journals, books, multimedia, and data. CIRC is the hub in providing information literacy & research support to faculty & students, the Ministry of Agriculture, and NGOs. CASD uses the most up to date information technologies to support community knowledge and libraries in rural communities via outreach efforts by extension agents & librarians.

CASD 305 Information use and technology

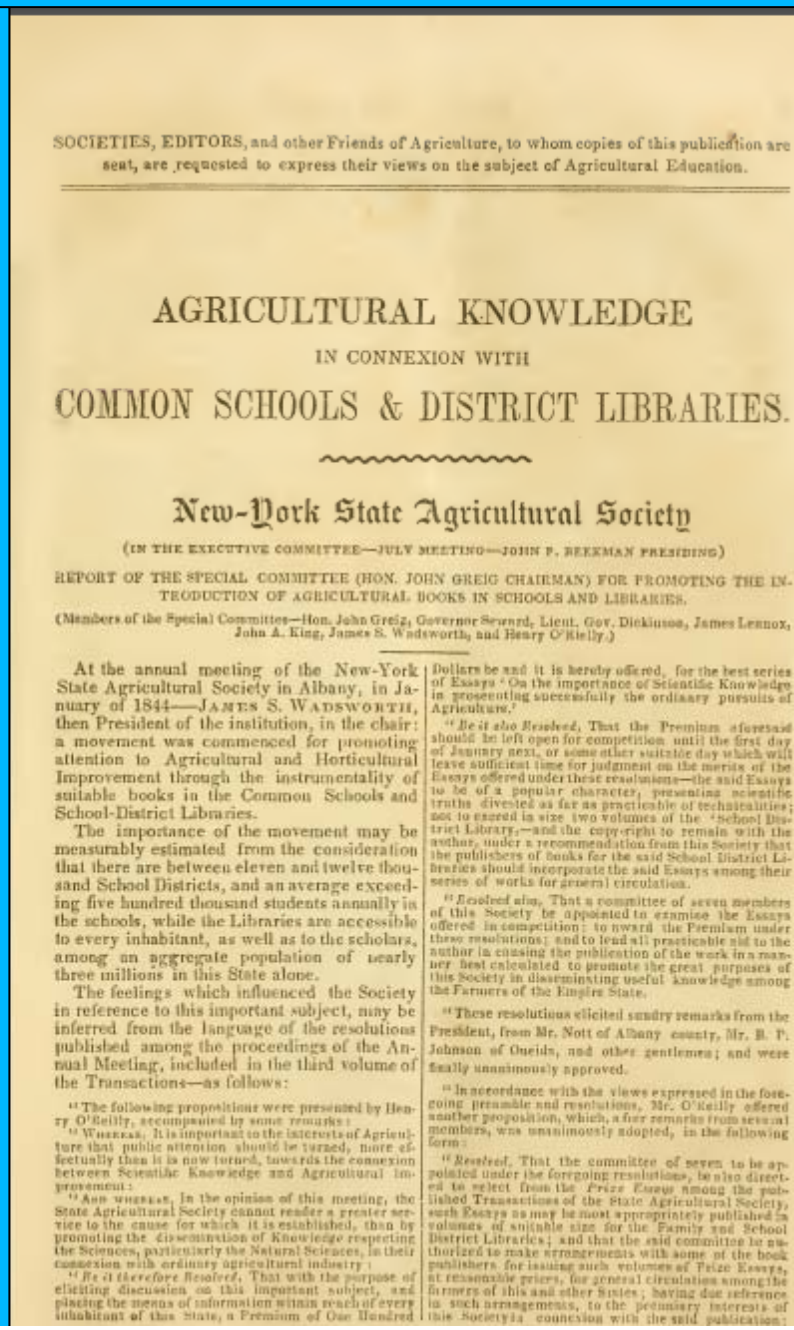
- Effective use of digital information.
- New technologies, particularly mobile devices with information to take into the field and to make available to others
- Review communication channels for providing information as part of extension for post-harvest produce, market information, etc.
- This course may be taught via webinars and distance learning and involves a hands-on approach to accessing information in today's world.

WE CARE Library, Monrovia

Agriculture and Public Libraries:

Not A New Concept

"Arrangements for Diffusing Agricultural Knowledge Through the Instrumentality of Common Schools and Public Libraries," New York State Agricultural Society. Albany, New York, 1844.



SOCIETIES, EDITORS, and other Friends of Agriculture, to whom copies of this publication are sent, are requested to express their views on the subject of Agricultural Education.

AGRICULTURAL KNOWLEDGE

IN CONNEXION WITH

COMMON SCHOOLS & DISTRICT LIBRARIES.

New-York State Agricultural Society

(IN THE EXECUTIVE COMMITTEE—JULY MEETING—JOHN P. BEEKMAN PRESIDING)

REPORT OF THE SPECIAL COMMITTEE (HON. JOHN GREIG CHAIRMAN) FOR PROMOTING THE INTRODUCTION OF AGRICULTURAL BOOKS IN SCHOOLS AND LIBRARIES.

(Members of the Special Committee—Hon. John Greig, Governor Seward, Lieut. Gov. Dickinson, James Lennox, John A. King, James S. Wadsworth, and Henry O'Reilly.)

At the annual meeting of the New-York State Agricultural Society in Albany, in January of 1844—JAMES S. WADSWORTH, then President of the institution, in the chair: a movement was commenced for promoting attention to Agricultural and Horticultural Improvement through the instrumentality of suitable books in the Common Schools and School-District Libraries.

The importance of the movement may be measurably estimated from the consideration that there are between eleven and twelve thousand School Districts, and an average exceeding five hundred thousand students annually in the schools, while the Libraries are accessible to every inhabitant, as well as to the scholars, among an aggregate population of nearly three millions in this State alone.

The feelings which influenced the Society in reference to this important subject, may be inferred from the language of the resolutions published among the proceedings of the Annual Meeting, included in the third volume of the Transactions—as follows:

"The following propositions were presented by Henry O'Reilly, accompanied by some remarks:

"WHEREAS, It is important to the interests of Agriculture that public attention should be turned, more effectually than it is now turned, towards the connexion between Scientific Knowledge and Agricultural improvement:

"AND WHEREAS, In the opinion of this meeting, the State Agricultural Society cannot render a greater service to the cause for which it is established, than by promoting the dissemination of Knowledge respecting the Sciences, particularly the Natural Sciences, in their connexion with ordinary agricultural industry:

"*Be it therefore Resolved*, That with the purpose of eliciting discussion on this important subject, and placing the means of information within reach of every inhabitant of this State, a Premium of One Hundred Dollars be and it is hereby offered, for the best series of Essays 'On the importance of Scientific Knowledge in prosecuting successfully the ordinary pursuits of Agriculture.'

"*Be it also Resolved*, That the Premium aforesaid should be left open for competition until the first day of January next, or some other suitable day which will leave sufficient time for judgment on the merits of the Essays offered under these resolutions—the said Essays to be of a popular character, presenting scientific truths divested as far as practicable of technicalities; not to exceed in size two volumes of the 'School District Library,'—and the copy-right to remain with the author, under a recommendation from this Society that the publishers of books for the said School District Libraries should incorporate the said Essays among their series of works for general circulation.

"*Resolved also*, That a committee of seven members of this Society be appointed to examine the Essays offered in competition; to award the Premium under these resolutions; and to lend all practicable aid to the author in causing the publication of the work in a manner best calculated to promote the great purposes of this Society in disseminating useful knowledge among the Farmers of the Empire State.

"These resolutions elicited sundry remarks from the President, from Mr. Nott of Albany county, Mr. B. P. Johnson of Oneida, and other gentlemen; and were finally unanimously approved.

"In accordance with the views expressed in the foregoing preamble and resolutions, Mr. O'Reilly offered another proposition, which, after remarks from several members, was unanimously adopted, in the following form:

"*Resolved*, That the committee of seven to be appointed under the foregoing resolutions, be also directed to select from the *Prize Essays* among the published Transactions of the State Agricultural Society, such Essays as may be most appropriately published in volumes of suitable size for the Family and School District Libraries; and that the said committee be authorized to make arrangements with some of the book publishers for issuing such volumes of Prize Essays, at reasonable prices, for general circulation among the farmers of this and other States; having due reference to such arrangements, to the pecuniary interests of this Society in connexion with the said publication;

Ideal Public Library Programs in Agriculture

- Social spaces where traditional and modern technology converge
- Collecting and developing indigenous knowledge to increase productivity and as a foundation for sustainability
- Participatory community engagement approaches
- Repackaging appropriate information through various forms including oral history, story telling as well as ICT.

Collence, T. "Role of libraries in promoting the dissemination and documentation of indigenous agricultural information: Case Study of Zimabawe, IFLA 2011, Puerto Rico.

HOW DO YOU SAY REFERENCE??

- Providing assistance to users (Brazil)
- Leading users to information (Nigeria)
- Support instructional and research programs (Phillipines)
- Satisfy users with precise up to date information (Venezuela)
- Teaching information literacy, help with reading (St. Maartens)
- Access to information in all formats (Trinidad and Tobago)
- Promote the library as a place for learning and information (New Zealand)
- A service based on the needs of the users (China)
- DO NOT……. (Liberia, other countries??)

UNESCO/IFLA Public Library Manifesto

- The Library is the trusted local center of information making all kinds of knowledge and information available to its users
- Support individual, self-conducted, and formal education
- Facilitate the development of information and computer literacy skills
- Promote awareness of cultural heritage, appreciation of the arts, scientific (agriculture) achievements and innovation (importance of indigenous knowledge that may be lost)
- Provide adequate information services to local enterprises, associations, and interest groups

Rural Models: Basic e-Learning library BeLL from OLE

- Open system runs on Drupal (CMS), does not require electricity (runs on solar panel or car battery)
- Focus is on interactivity; preloaded with some curated courseware/information.
- Once engaged, communities can add content.
- See Open Learning Exchange, www.ole.org for more
- Evidence-based solution with success in Ghana, Rwanda, Uganda, Nepal, and Bolivia for schools. For Liberia???

Success Stories: Public Libraries in Africa & Agriculture

Eradicate Poverty and Hunger – In Kenya, Uganda, and Tanzania, a network of public knowledge centers reach 1.5 million people – access to information, training, and ICT for farmers for sustainable agriculture and markets for post-harvest produce.

Gender Equality and Empowerment – Kitengesa Library in Uganda provides a safe gathering space for women for computer access to digital content, adult literacy, small business development and micro-loans, organic farming techniques.

EIFL-PLIP:

Electronic Information for Libraries Public Libraries Innovation Program

- Public libraries train farmers to use computers and the Internet and provide vital information through web portals, webinars, social media, mobile forms.

- Impact Assessment on how public libraries help modernize farming techniques and developing new markets.

FAVL: Friends of African Village Libraries

- Charity based on donations
- Helps to set up libraries and refurbish community donated buildings.
- Partners with fastpencil.com (distributes ebooks from a variety of publishers).
- One example is empowering women and agriculture workers in Uganda.

IFLA: International Federation of Library Associations

- Agriculture Discussion Group part of STS
- Public Libraries Section
- Academic and Research Libraries Section
- Area Focused Sections: Africa, Latin America, Asia and Oceana, etc. IFLA Africa Office hosts Library Summits for public and other libraries
- Funded by dues, UNESCO
- International advocacy for libraries

IREX Global Libraries

- Moved focus from Eastern Europe to Africa
- Partners with national oganizations to promote access to agricultural subsitdies.
- Spearheaded the Beyond Access.Net initiative with Gates funding

Beyond Access.Net
Public Libraries Powering Development

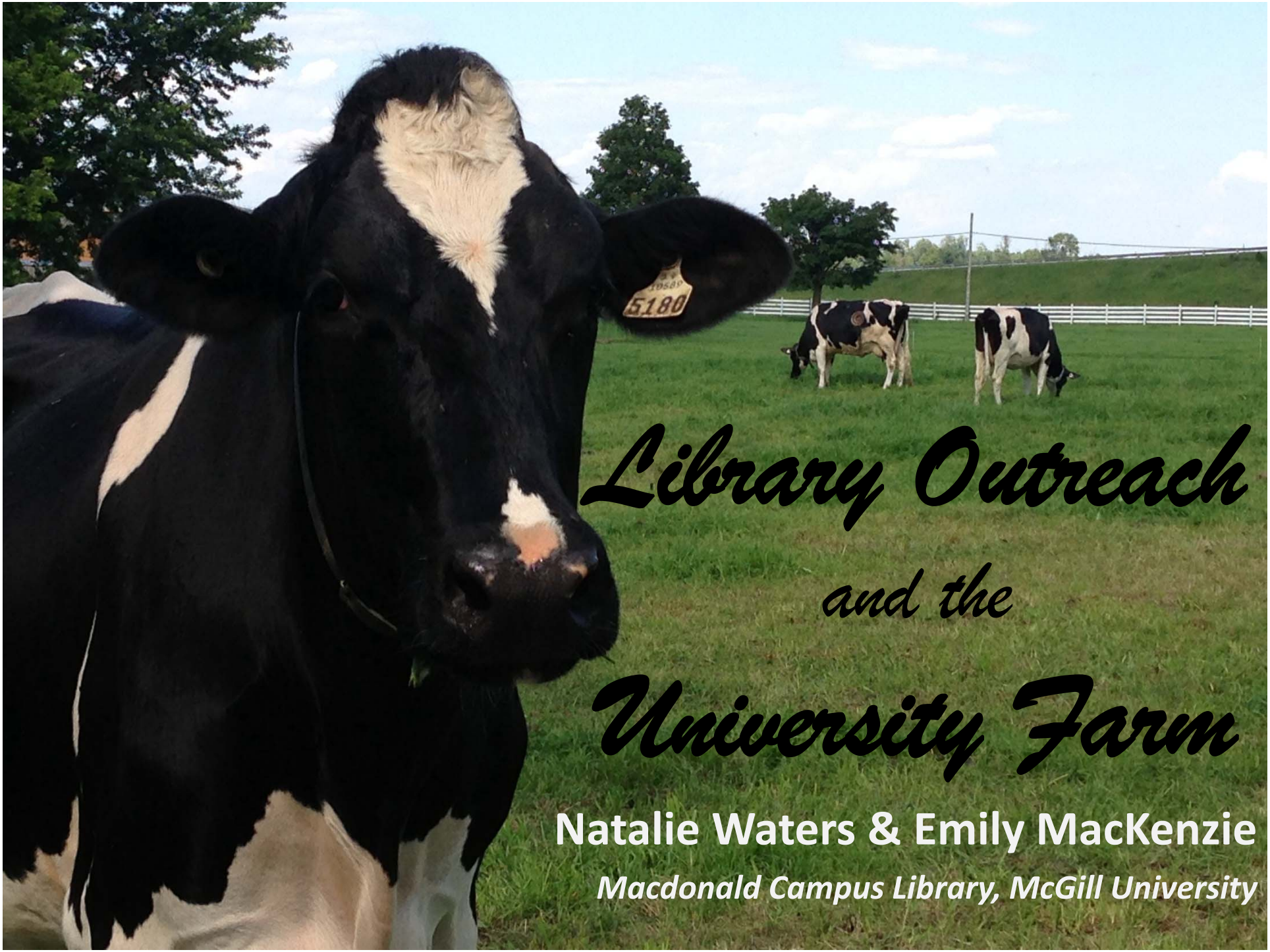
- Similar to CIARD: Coherence and major initiative backed by IREX, IFLA, EIFL, GATES, etc. "Libraries build communities"
- Focus: locally based, sustainable libraries, professionally staffed by librarians, trusted by communities served
- Several agriculture projects highlighted by public libraries in developing countries
- Washington DC October 2012 Meeting: Public Libraries need access to practical agriculture information.

EAKO: Concept and Call for Partners
Essential Agriculture Knowledge Offline

- Rutgers University taking the lead
- Need for offline practical agriculture information for public libraries who are the major disseminators of agriculture information in the communities they serve
- Internet connectivity and electricity are often unavailable in rural communities in developing countries.
- Teaching tool for extension.
- So far over 2000 items identified, to be vetted and enriched with metadata. Re-using the engineering EAKO XTF platform.

LIBERIA – OPPORTUNITIES TO TELL GREAT STORIES

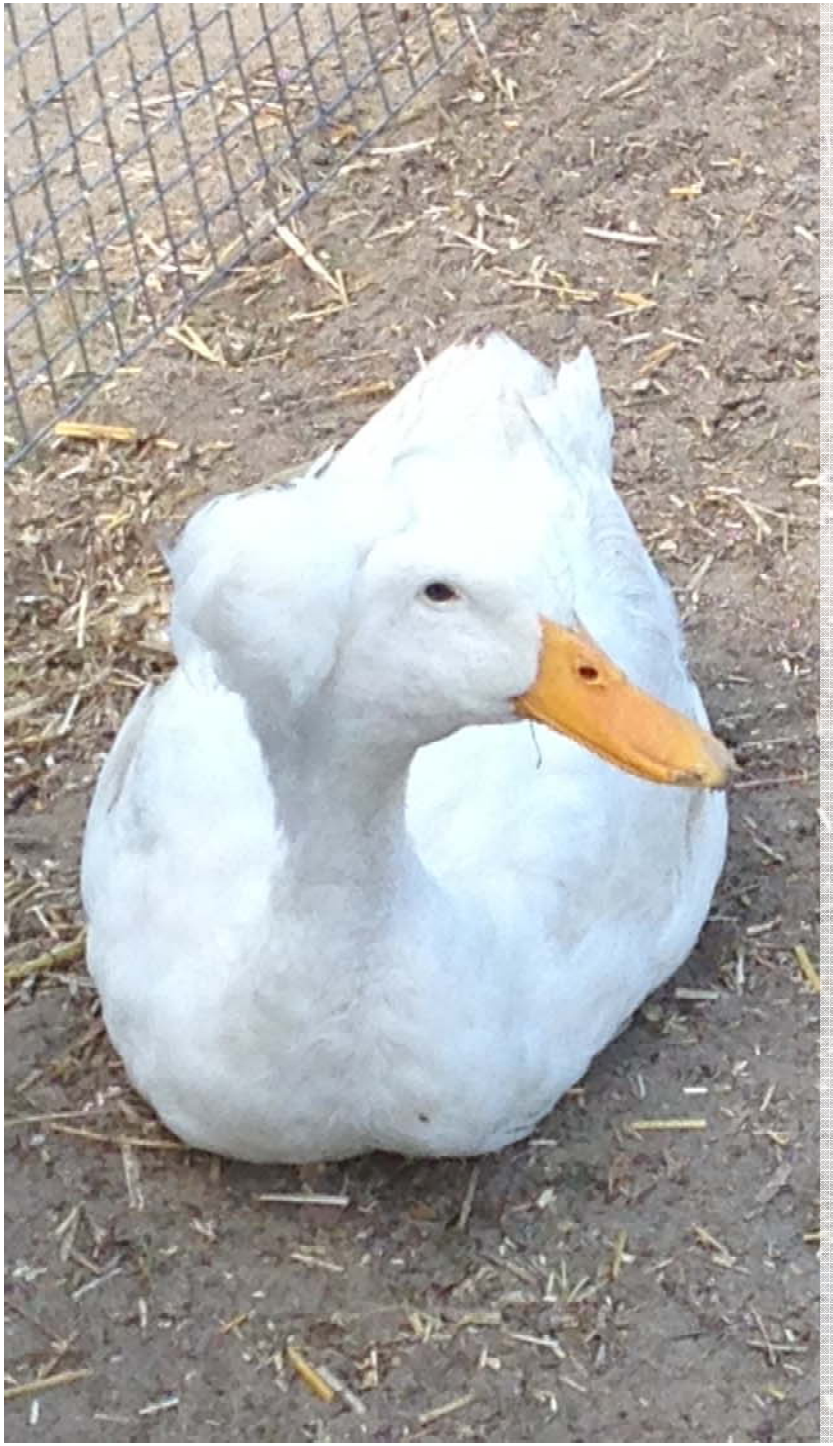
- A **National Library** with links to academic libraries and a place for public library development
- **Trained librarians starting with a Science Librarian at University of Liberia with National responsibilities**
- **Robust Public Library System** in Monrovia and a system of **Knowledge Centers** in rural communities
- **EAKO for practical agriculture information**



Library Outreach and the University Farm

Natalie Waters & Emily MacKenzie

Macdonald Campus Library, McGill University



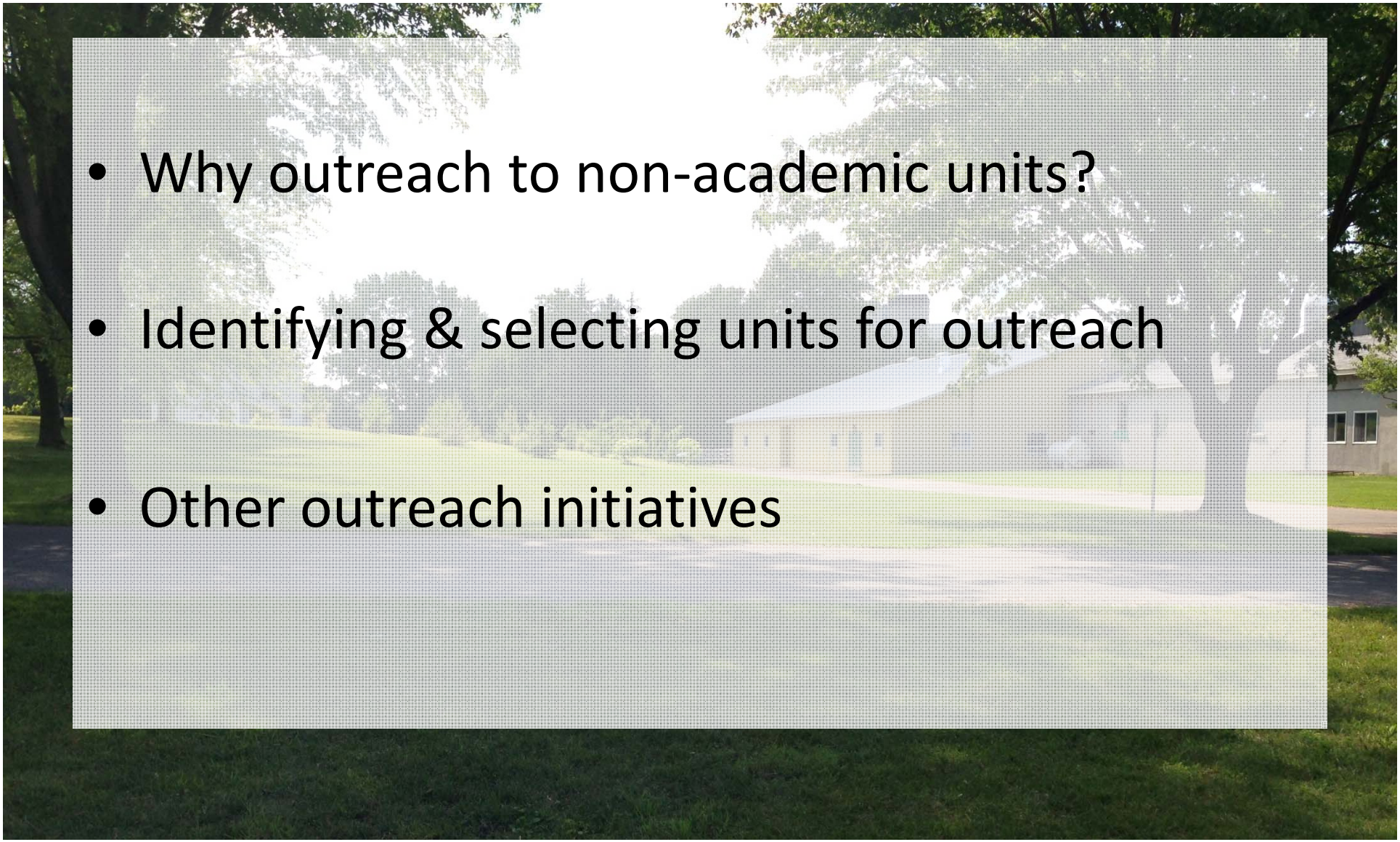
Topics

- About us
- Library Outreach
- What we learned
- Future plans
- Questions

About us

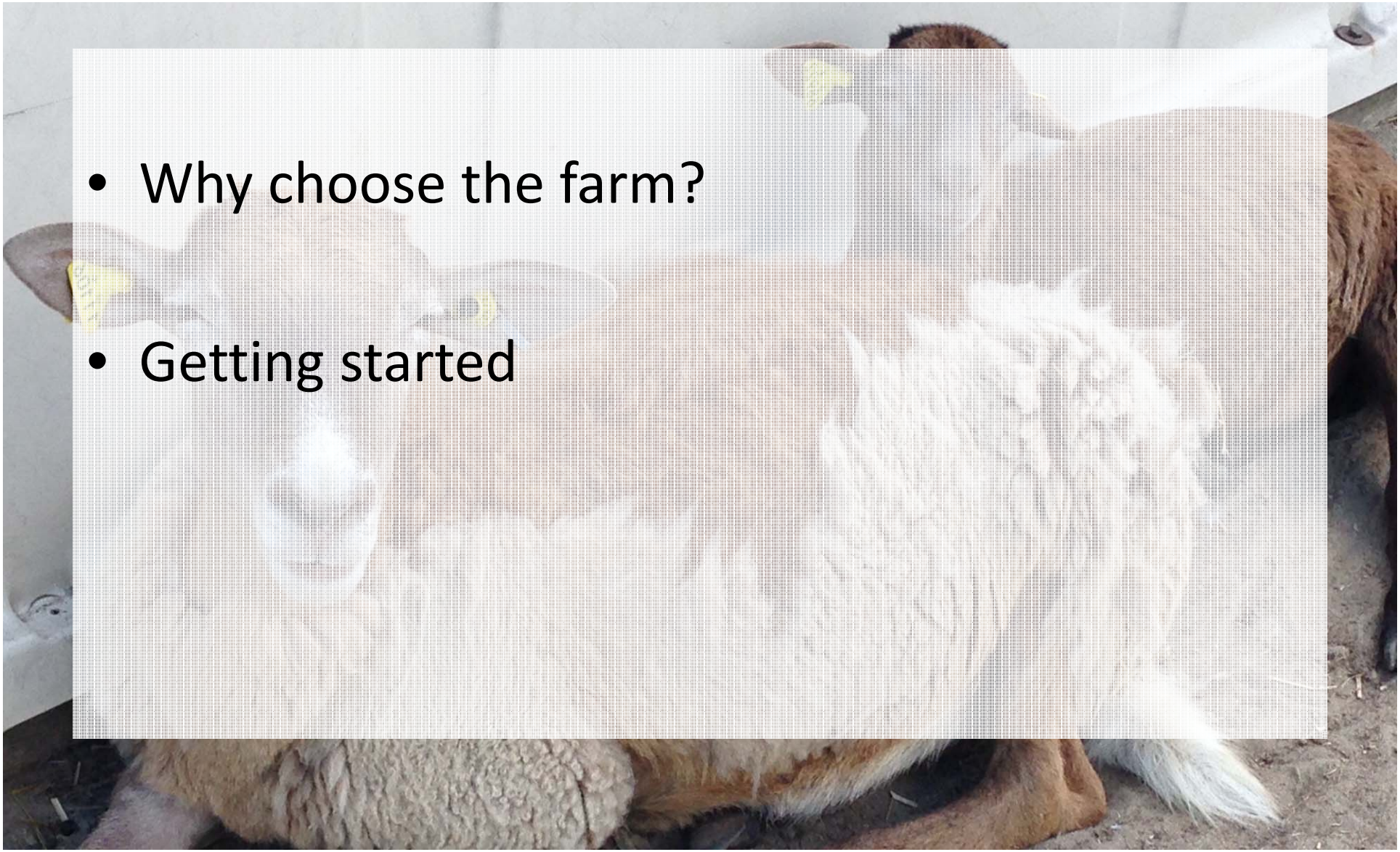
- McGill University, Montreal, Canada
- Macdonald Campus Library
- Liaison Librarians

Library Outreach: Non-Academic Units



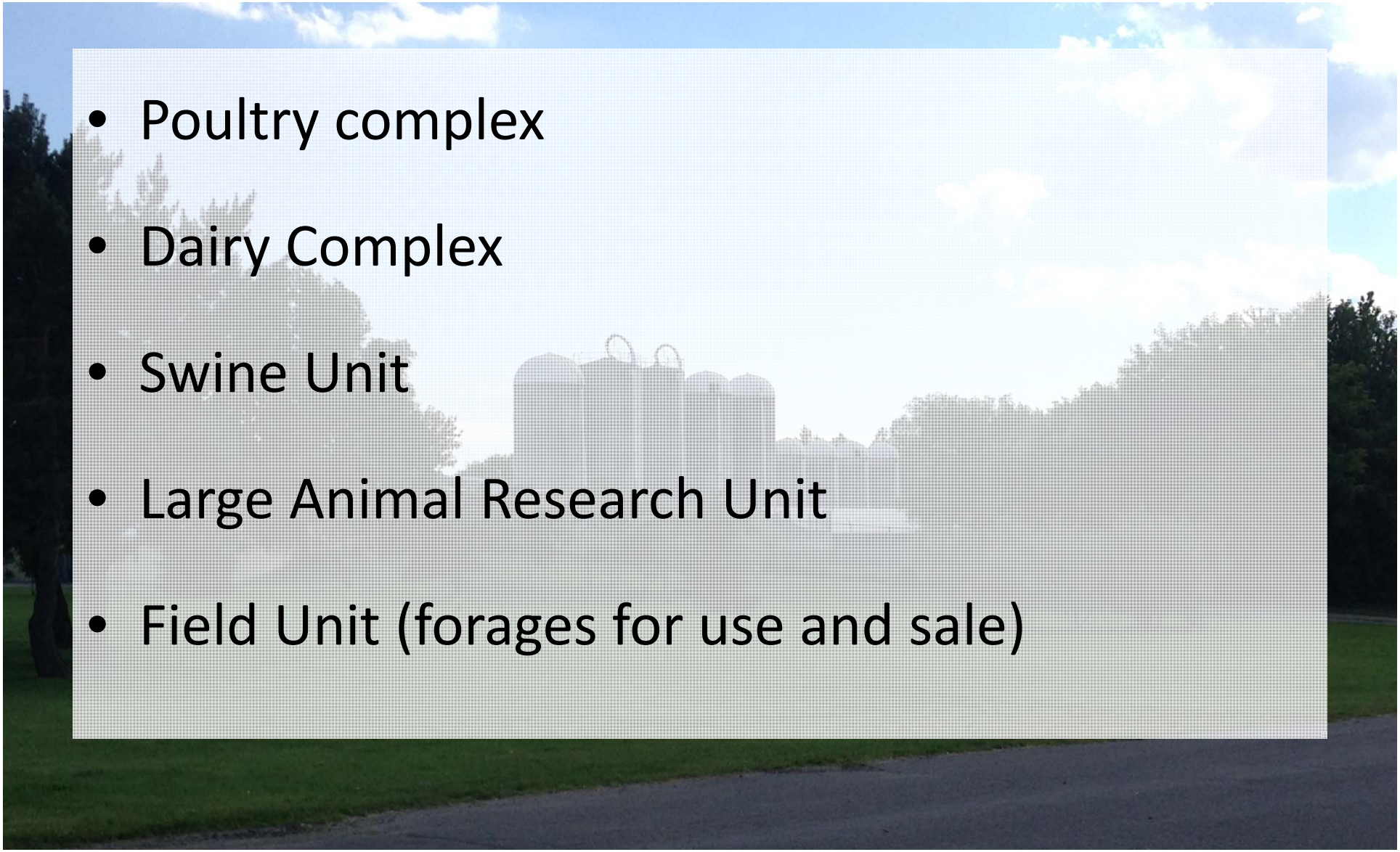
- Why outreach to non-academic units?
- Identifying & selecting units for outreach
- Other outreach initiatives

Library Outreach: The Farm



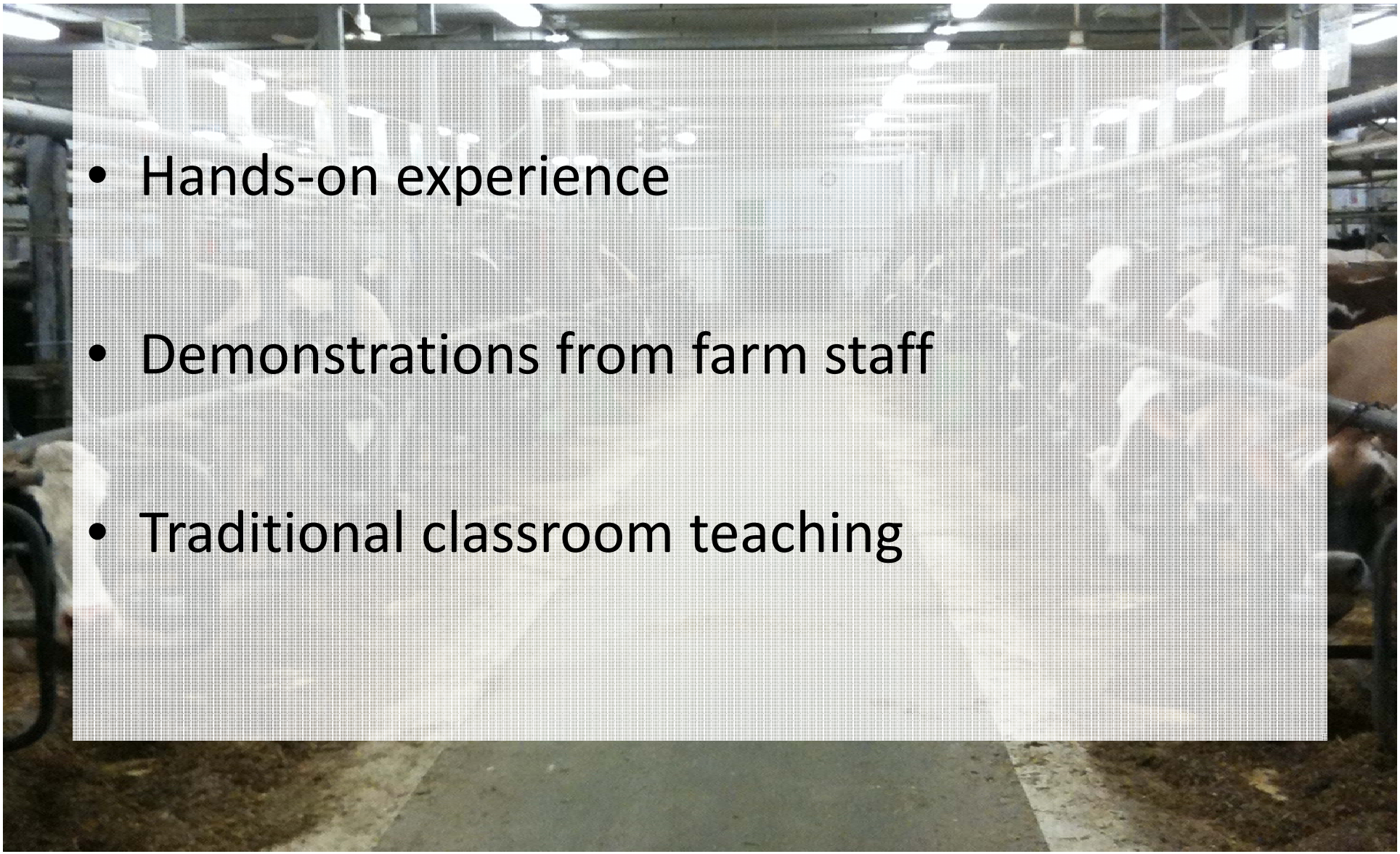
- Why choose the farm?
- Getting started

About the Farm



- Poultry complex
- Dairy Complex
- Swine Unit
- Large Animal Research Unit
- Field Unit (forages for use and sale)

What we learned: Teaching Activities

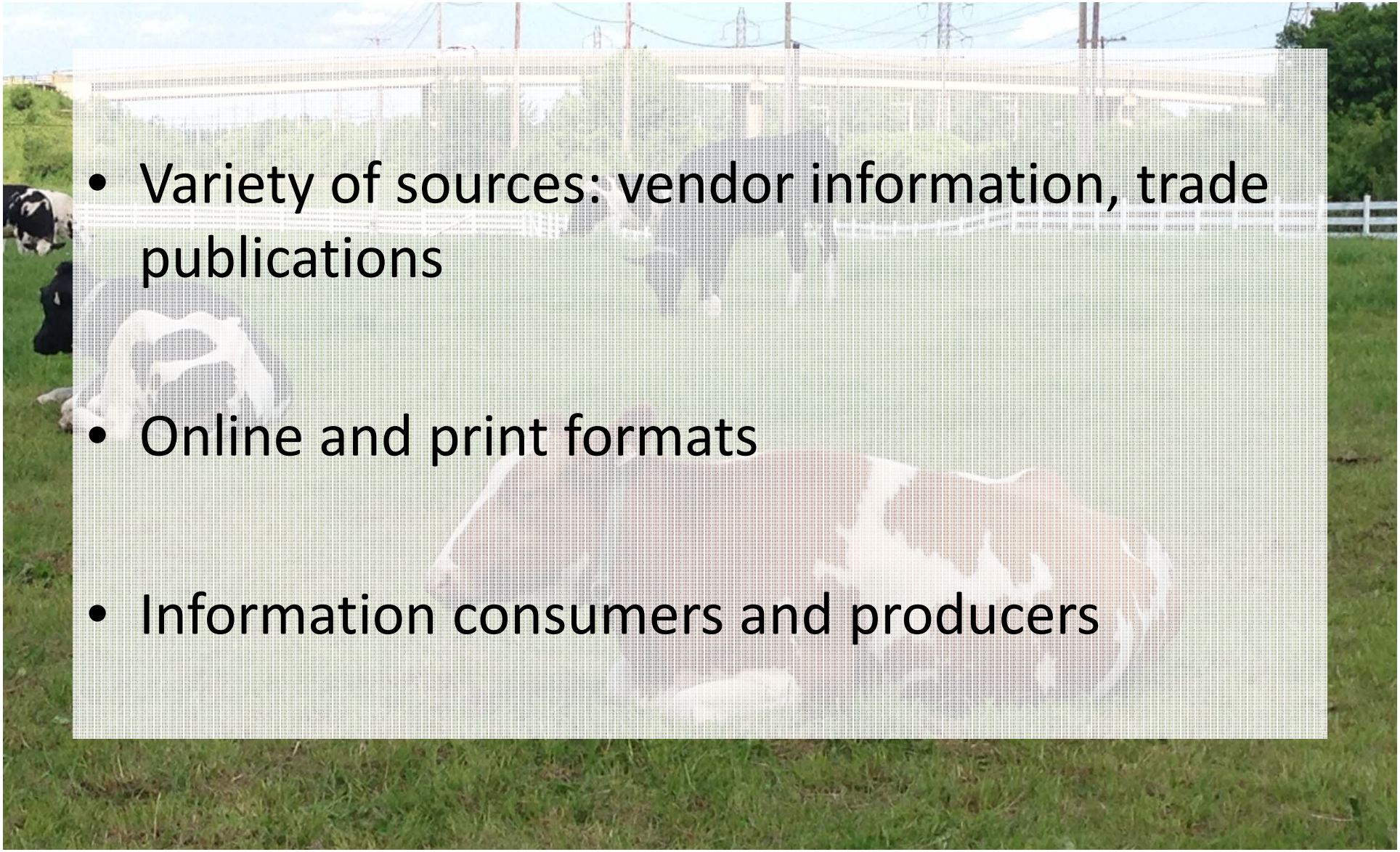


- Hands-on experience
- Demonstrations from farm staff
- Traditional classroom teaching

What we learned: Community Outreach

- Organized education tours for school children
- Programme expanding
- New interpretive centre

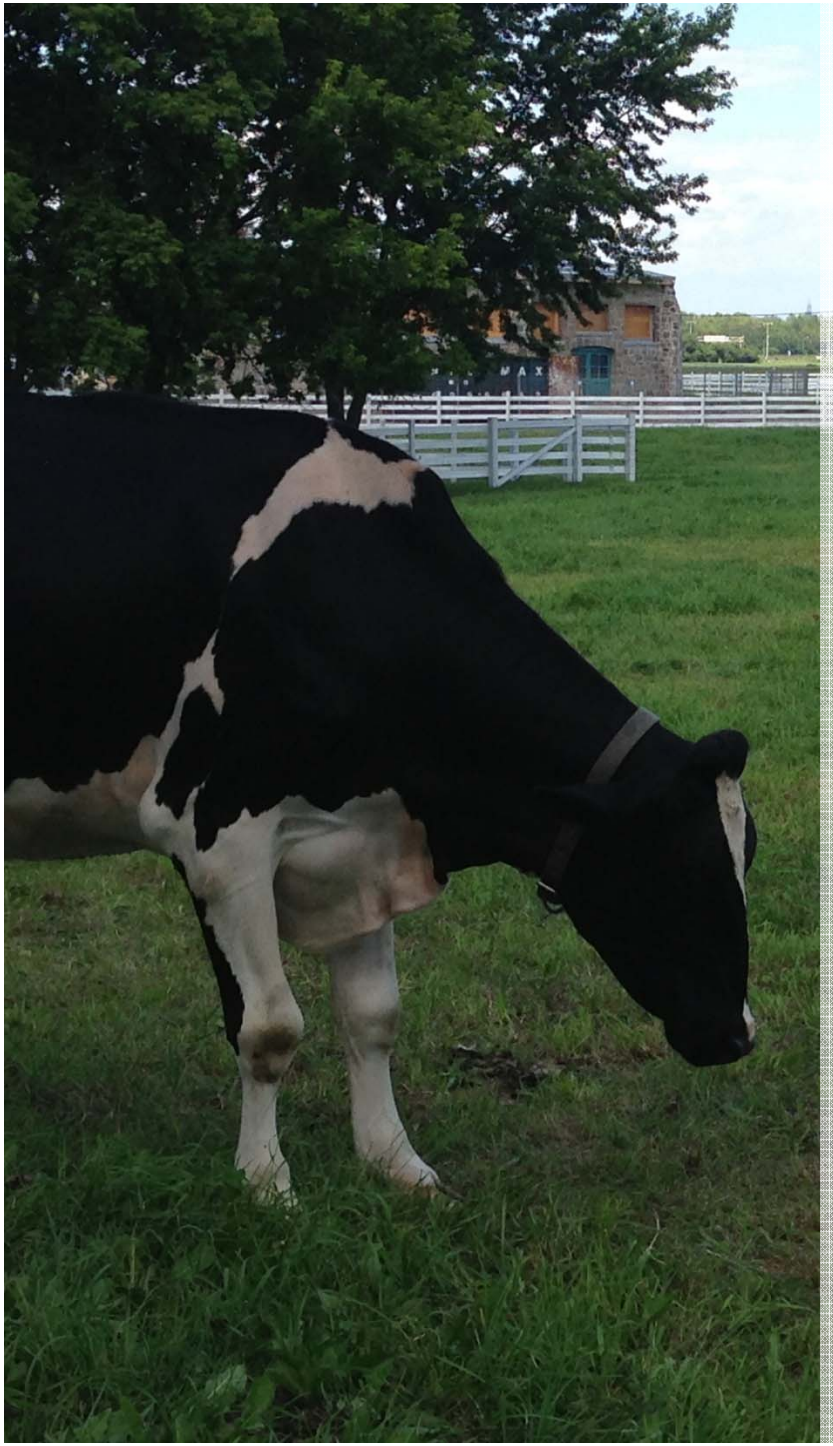
What we learned: Information Needs



- Variety of sources: vendor information, trade publications
- Online and print formats
- Information consumers and producers

Future Plans

- Follow-up on opportunities identified with the farm
- Identify other departments with similar potential for beneficial outreach



Questions?

Special thanks to

Paul Meldrum

SECRETARIAT OF THE PACIFIC COMMUNITY
SECRÉTARIAT GÉNÉRAL DE LA COMMUNAUTÉ DU PACIFIQUE

SPC – Land Resources Division Information and Knowledge Management Strategy (a learning process)



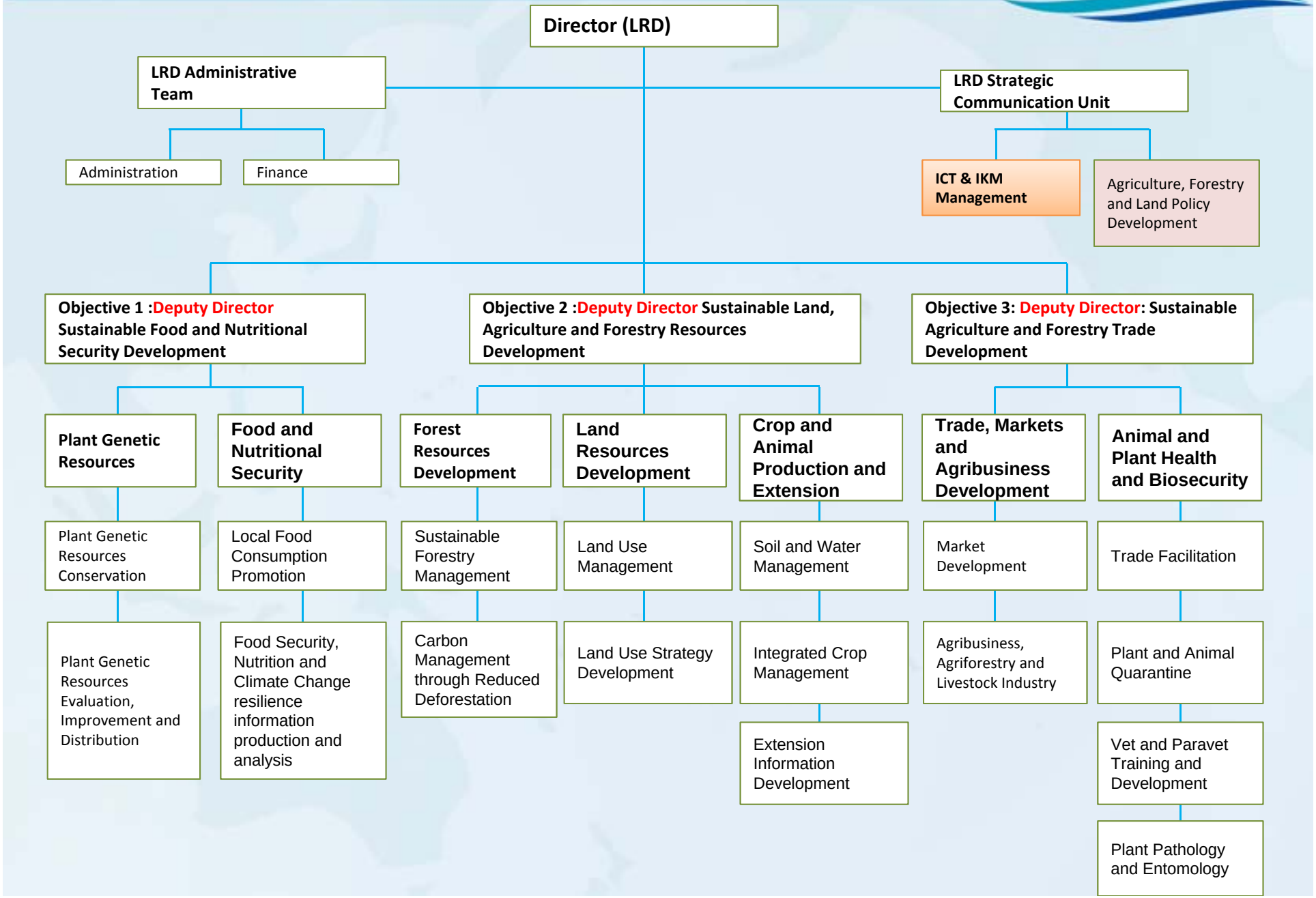
Secretariat of the Pacific Community

- SPC is an international organisation that works in public health, geoscience, agriculture, forestry, water resources, disaster management, fisheries, education (community, TVET, quality and standards for all school levels), statistics, transport, energy, ICT, media, human rights, gender, youth and culture to help Pacific Island people achieve sustainable development.

- SPC's members are the 22 Pacific Island countries and territories that are the beneficiaries of its services, along with four of the original founding countries (Australia, France, New Zealand and the United States of America)

- For more information you can visit: http://www.spc.int

SPC – Land Resources Division



What is KM?

- KM --- comprises a range of strategies and practices used in an organisation to identify, create, represent, distribute, and enable adoption of insights and experiences - **wikipedia**

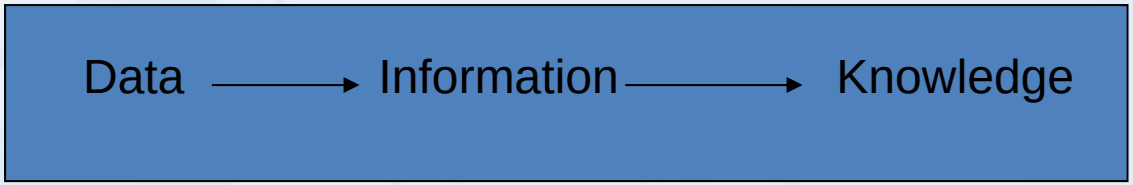
- A "management mind-set"/framework which builds on past experiences (libraries, data-banks, experts), creates new ways to exchange Knowledge (K-enabled intranets, CoPs, networks) – **KM institute**

What is knowledge?

- Understanding gained from experience and analysis
- 2 types of knowledge
  - Tacit : what's in people's heads ("know how", "know why" rather than the "know what")
  - Explicit : what is documented e.g publication on livestock management

Difference between Knowledge and Information

- Information is processed data e.g the percentage of population who smoke
- Knowledge is I^{K} = New K/better decision making e.g 80% people smoking cigarettes have cancer (understanding the meaning or topic is knowledge



The need for KM in SPC - LRD?

- As knowledge management (KM) emerged in 1990's, there were a lot of discussions taking place on what KM really meant in the context of regional organisations.

- In 2005, the Land Resources Division of the Secretariat of the Pacific Community, a regional and international organisation started the journey of introducing the **concept** of knowledge management.

- The SPC-LRD division felt an urgent need to improve its internal data and information management and to create mechanisms to benefit more from knowledge and expertise existing among its staff.

Information and Knowledge Management

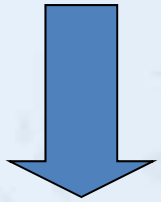
- In 2006, SPC - LRD developed the Information and Knowledge Management (IKM) strategy to critically assess the situation of SPC-LRD, evaluate information systems and ways of accessing and disseminating information and also to provide a set of action plans to implement the KM strategy from a theoretical perspective to a more practical process.

- Plan of Action covered information management activities which was the standardization of LRD data **(outlined in the IKM strategy)**

Where is the K in LRD?

- Tacit Knowledge
  - In the minds of staff in the SPC - LRD
- Explicit Knowledge
  - Work files – duty travel reports, consultancies, training manuals, survey reports etc

How is this K managed – shared, made easily accessible etc?



Knowledge Management

LRD – KM activities

LRD website

Monthly Newsletter distributed by snail mail (Print media)

Newsletter on the website


LAND RESOURCES NEWS

Growing the Pacific. Growing our future together.

Smallholder farmers need improved rural advisory services for food security

Smallholder agriculture and family farming is the core contributor to agricultural production in most developing countries, and therefore vital for achieving food and nutritional security. Urgently, a coalition of public, private and civil society actors at national, regional and international levels is needed to revitalise and strengthen agricultural extension and advisory systems. These are two of the challenges put forward by more than 400 participants who attended the international conference on Innovations in extension and advisory services: Linking knowledge to policy and action for food and livelihoods — or the International Extension Conference for short.

The conference was held in Nairobi, Kenya from 15 to 18 November 2011. The Pacific region was well represented as this global level SPC Land Resources Division's Pacific Islands Extension Network (PIEN), the University of the South Pacific, a Pacific farmers' association and CTA Pacific all sent representatives to voice the concerns of Pacific Island countries and territories.

Participants from 75 countries participated: farmers, extension professionals, policy-makers, researchers, academics, representatives of the private sector and the media. Rural advisory services (RAS) are increasingly recognised by many rural development actors as an essential vehicle to ensure that research, development of farmer organisations, improved inputs, and other elements of rural development support actually meet farmers' and other rural actors' needs and demands.

Despite past advances in agricultural innovations through improved crops and farming systems, much of the developing world still faces challenges in food and nutrition security, non-sustainable agricultural practices, poor access to markets, and a falling contribution of agriculture to national GDP. Rural farming communities have not really benefited from advances in agricultural technology. The diminishing national extension and advisory services reflect reduced government investment in agriculture. Now, the global community, responding to this situation, is revisiting extension and advisory services as the critical link in the agricultural value chain, where smallholder farmers are key actors of agriculture.

Director of CTA, Michael Hailu in his opening remarks said that the conference theme, *Linking knowledge to policy and action for food and livelihoods*, is very relevant and provides a new perspective to extension and advisory services. He said 75% of the poor in developing countries live in rural areas and the majority of them depend on agriculture for their livelihoods. He pointed to smallholder farmers as the primary group producing

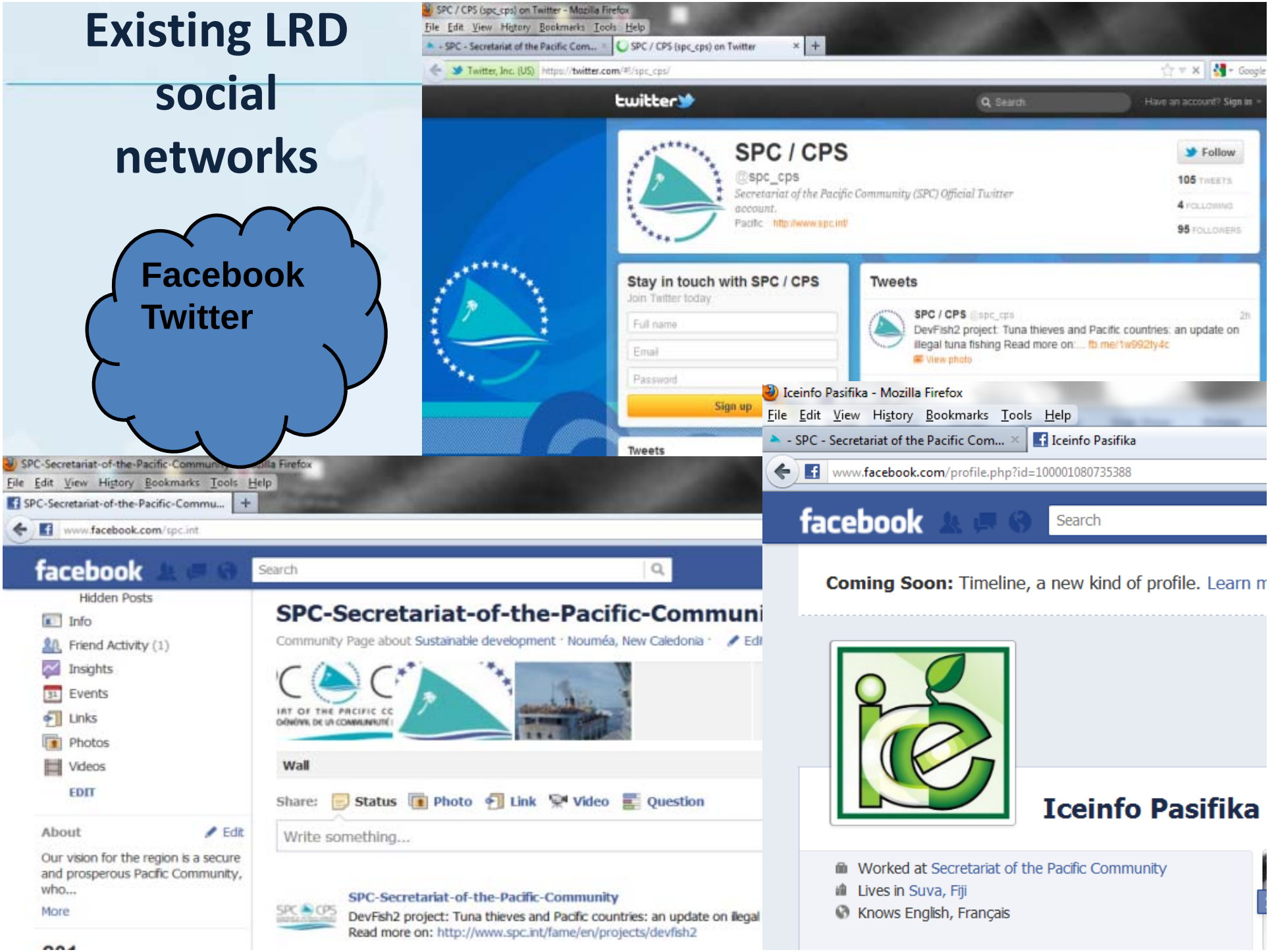
...cont'd on pg 2

Pacific representation at these international fora is pivotal to efforts to ensure that Pacific concerns at the global level alongside those of other countries such as India, Brazil, China, and the USA. PIEN, in linking national extension systems to the global community, can tap into relevant and appropriate knowledge in the Pacific. SPC has indicated likely funding for the next PIEN consultation in 2012.

Michael Hailu, CTA Director and GRAS Executive Director, Dr Kristin Davis viewed the PIEN poster on display at the venue of the International Extension Conference, Nairobi, Kenya. Flanked by posters from South America, Africa and Asia, the PIEN poster created a lot of interest, not only because the network interlinks all SPC member countries but also because of its cultural element and the common bond amongst the Pacific Islands.

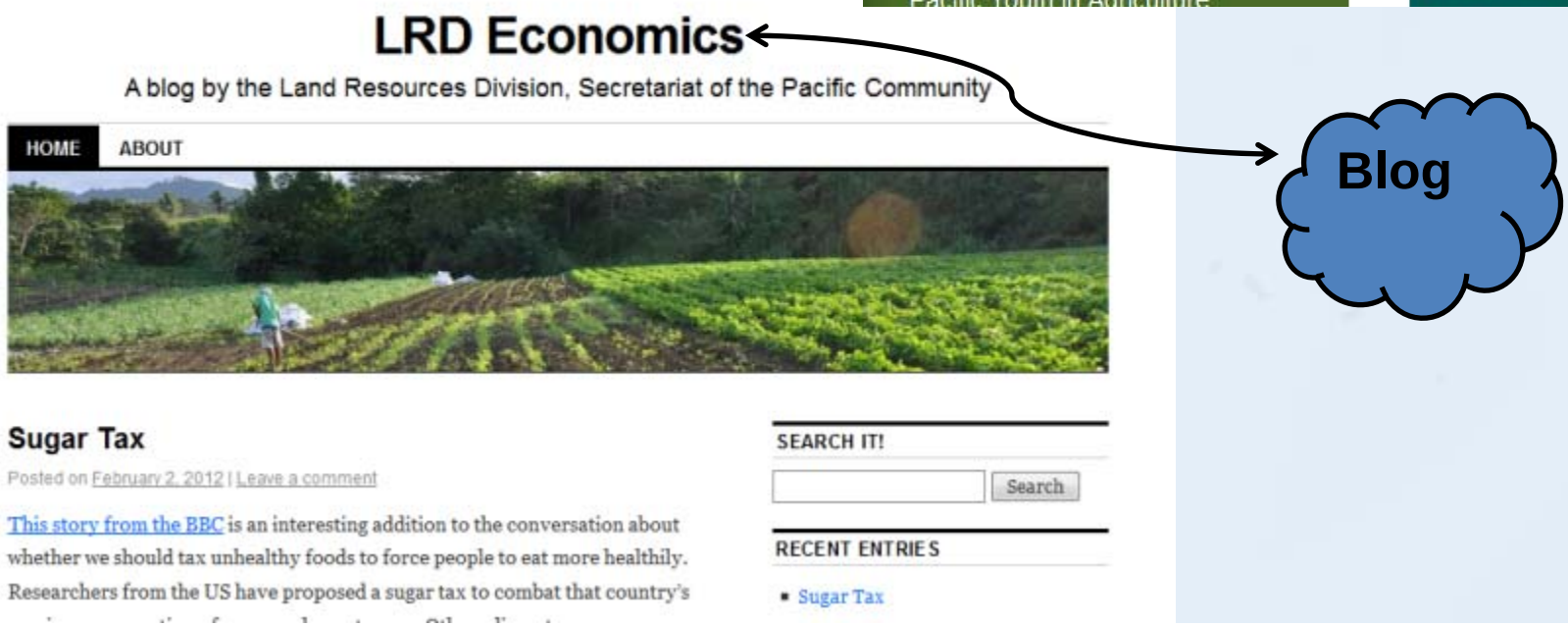
Existing LRD social networks

Facebook
Twitter

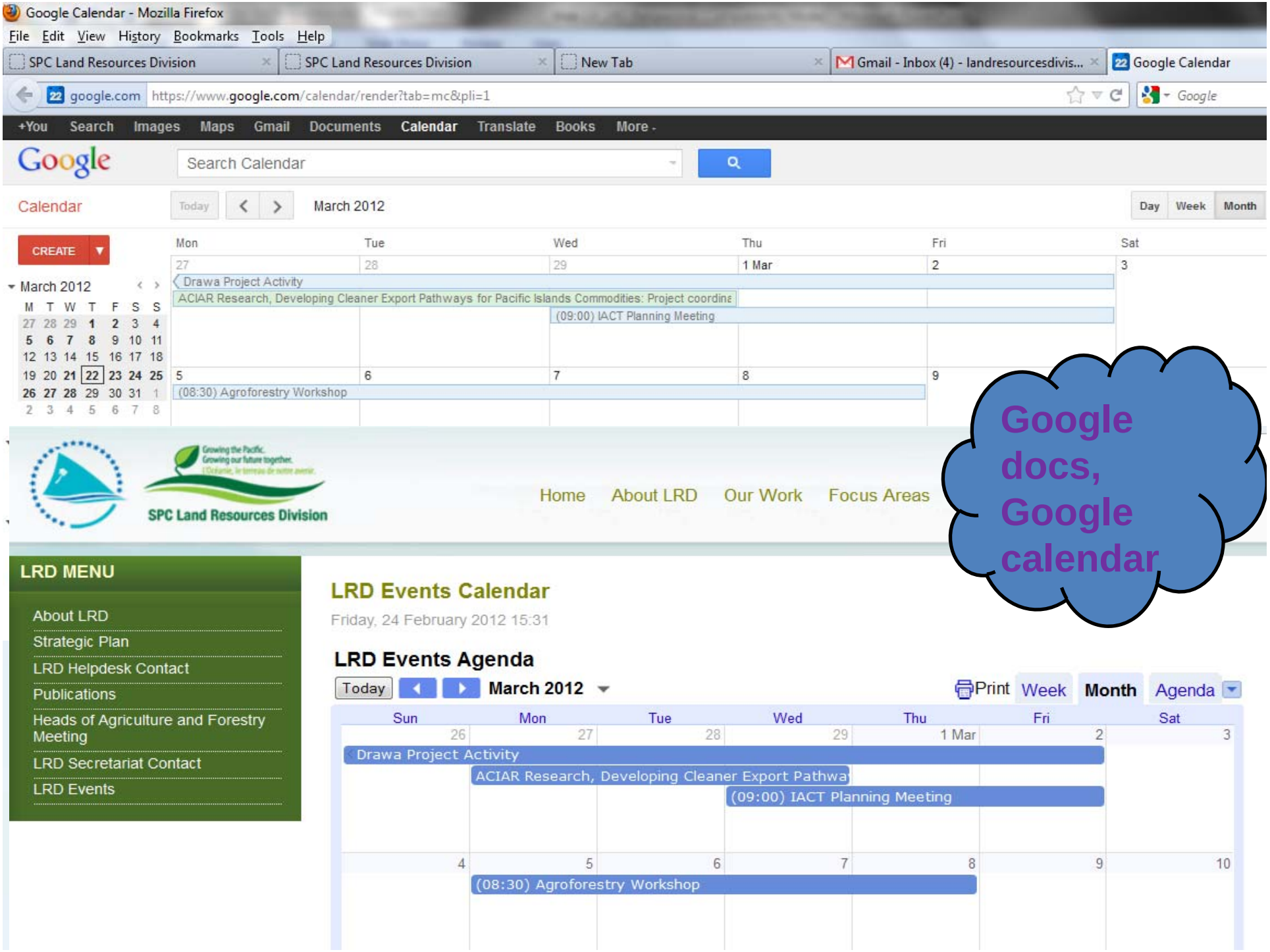


Existing LRD Social Networks

Wiki



Blog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M T W T F S S
Growing the Pacific. Growing our future together.
SPC Land Resources Division
Home About LRD Our Work Focus Areas
Google docs, Google calendar
LRD MENU
About LRD
Strategic Plan
LRD Helpdesk Contact
Publications
Heads of Agriculture and Forestry Meeting
LRD Secretariat Contact
LRD Events
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(08:30) Agroforestry Workshop

Success stories --- Ongoing initiatives and new initiatives

- KM Seminar
  - Create awareness (internal/external)
  - Workshops and also information talanoa session
  - Learning from your stakeholders

- Developed KM System/intranet/Portal
  - Knowledge base, document management system (naming convention)
  - Pacific Ag Link value chain portal

- New SPC LRD structure

  - Re-visit the 2006 KM strategy --- look at the success and failures, policy, architect, methodologies and processes

Ongoing initiatives and new initiatives

- Formed KM Dream Team
  - Important to have good communication skills
  - ICM and ICT - GIS
  - Website editors
  - Interns
  - Quality (content) auditor
- Identify KM initiatives
  - inline with new LRD Strategic -> SPC Corporate Plan -> Pacific Plan ->MDG
- Perform K Audit
  - Executive briefing, focus groups, surveys interviews, facilitated sessions
- LRD helpdesk, SPC virtual library, LRD intranet portal --- who can I ask for help or where can I find information?

How KM is helping SPC - LRD?

- Allows process of gathering data from the field, managing and sharing through common platform
- Allows more efficiency and effective business process
- Reasons to avoid re-inventing the wheel and avoid repeating mistakes

- Helps to capture knowledge before staff leave the organization or when staff retire, transfer out or when projects ends (basically prevents knowledge walkout)
- Helps us serve our stakeholders well and minimizes time spent on document searching etc
- Enhances staff working relationships, improves collaboration
- Gives means to IP, patents, copyrights and trademark
- Helps us to make good decisions

Challenges

- Keeping up with the pace of change – knowledge, information, technology, people, culture, structure
- Dealing with 2 types of people --- Sharers and Hoarders
  - Culture of hoarders --- not sharing information with co-workers
- Lack of trust and Lack of interaction between employees
- Not enough time/not enough resources/staffing issues
- Staff travelling and not being able to document crucial information
- Individuals with high levels of education & specialist skills tend to leave for better jobs/pay
- Users are not able to use news tools to get required information
- Old vs New --- trend of using the same system for past 30 years and not able to embrace new changes
- Sustainability issue (not understanding the bigger picture)
- Not enough time to transform data/information into knowledge (lack of interaction with key stakeholders)

Challenges

- Buy-in of SPC - LRD technical staff who possess tacit K.
- Promoting K sharing
  - E-learning, seminars, networking, mentoring, videos etc.
- Integrating knowledge management activities with day-to-day organisational functions & activities
- Increasing utilization of KM systems & tools (need to be up-to-date with latest systems and tools
- Budget constraints (overall KM and also establishing KM unit/dedicated staff)
- Funding and incentives needed

Challenges for KM and ICT within Pacific Countries

- Connectivity, relevant content, human capacity and awareness is a constraint.
- Rural clients do not have access to website.
- ICTs not always perceived as a tool for development.
- Lack of investment in ICT but changing slowly.
- Lack of expertise both scientific & IT personnels
- Most farmers are computer illiterate.
- Agricultural Officers are not fully aware of the potentials of ICT in agriculture.
- Speed for internet access is slow

Next steps contd.

- Continue building the KM community
  - Build Communities of Practice (CoP) with other organizations (learning from them)
  - Networks --- partners, stakeholders etc
  - Interactive Knowledge Cafes, virtual meeting room, virtual brainstorm or chat rooms etc (example, Engaging in UNDP Pacific Solution Exchange
- Perform Knowledge Mapping/Scan in collaboration with CTA
  - A knowledge scan takes a Topic view of an organisation, and asks “Is this working or not”? “How can we improve the knowledge sharing process”?

Next steps contd.

Using new emerging tools --- Embracing the power of social media and web 2.0 to support knowledge sharing

- Conducted train the trainers in SPC (not only agriculture experts but also public health, education, youths, transport, energy etc)
- Pilot training done in Fiji (Government representatives, Youths and Ministry of Agriculture)
- Introducing other disciplines like cybersecurity, privacy and security issues (social media policy)
- Vanuatu, Cooks Islands, Niue, Samoa and PNG in the pipeline

CTA KM initiative

- CTA KM advisory group --- Community constitutes the Advisory Group of the Knowledge Management interventions of the CTA as from 2012 (inception workshop on KM).
  - The initial members were those invited to the Expert consultation on KM for Agricultural & Rural Development for ACP institutions, held in Wageningen in September 2012.
  - http://dgroups.org/cta/cta-kmag/ --- CTA KM Advisory group (ACP countries and regional organisations
  - Fostering the knowledge management tree and increasing the global network --- contact focal points --- Krishan Bheenick: (Bheenick@cta.int and or Chris Addison: Addison@cta.int)

CTA KM initiative --- ongoing

- SPC to work with CTA plan a framework and prepare proposal to assist with implementation.
- SPC – LRD LRD has taken steps to improve the way we create, organize and use information and knowledge resources.
- The proposal will outline the changes on the use of information and building supportive information and knowledge culture within LRD to improve overall performance.
- CTA is planning a IKM strategy workshop in the Pacific. A pilot case of organizational scan will be launched in SPC
  - An expert consultation to be held in support of information centres in the ACP Region (Pacific countries).
  - As a follow up to KM scans, development of ICKM strategies launched through capacity building programs --- one regional workshop to be conducted in collaboration with SPC (to be held in 2014)

Opportunities/collaboration?

- What can IAALD members advise on the KM process?
- Are there any potential collaborators willing to collaborate with current partners/SPC?
- Looking from other people's kitchen? Any organisation willing to share their work on KM process?
- Sharing and documenting stories on successes and also failure – and how we can learn from it?

Enhancing Access to Research in Institutional Repositories through an API

Case Studies: LandPortal.info and ReSAKSS-Asia.info

Ryan Miller
Digital Services Librarian
International Food Policy Research Institute
2033 K St., NW
Washington, DC 20006
r.miller@cgiar.org

Overview of IFPRI

- International Food Policy Research Institute (IFPRI)
- Major publisher in the field of international agricultural research
- Member of the CGIAR

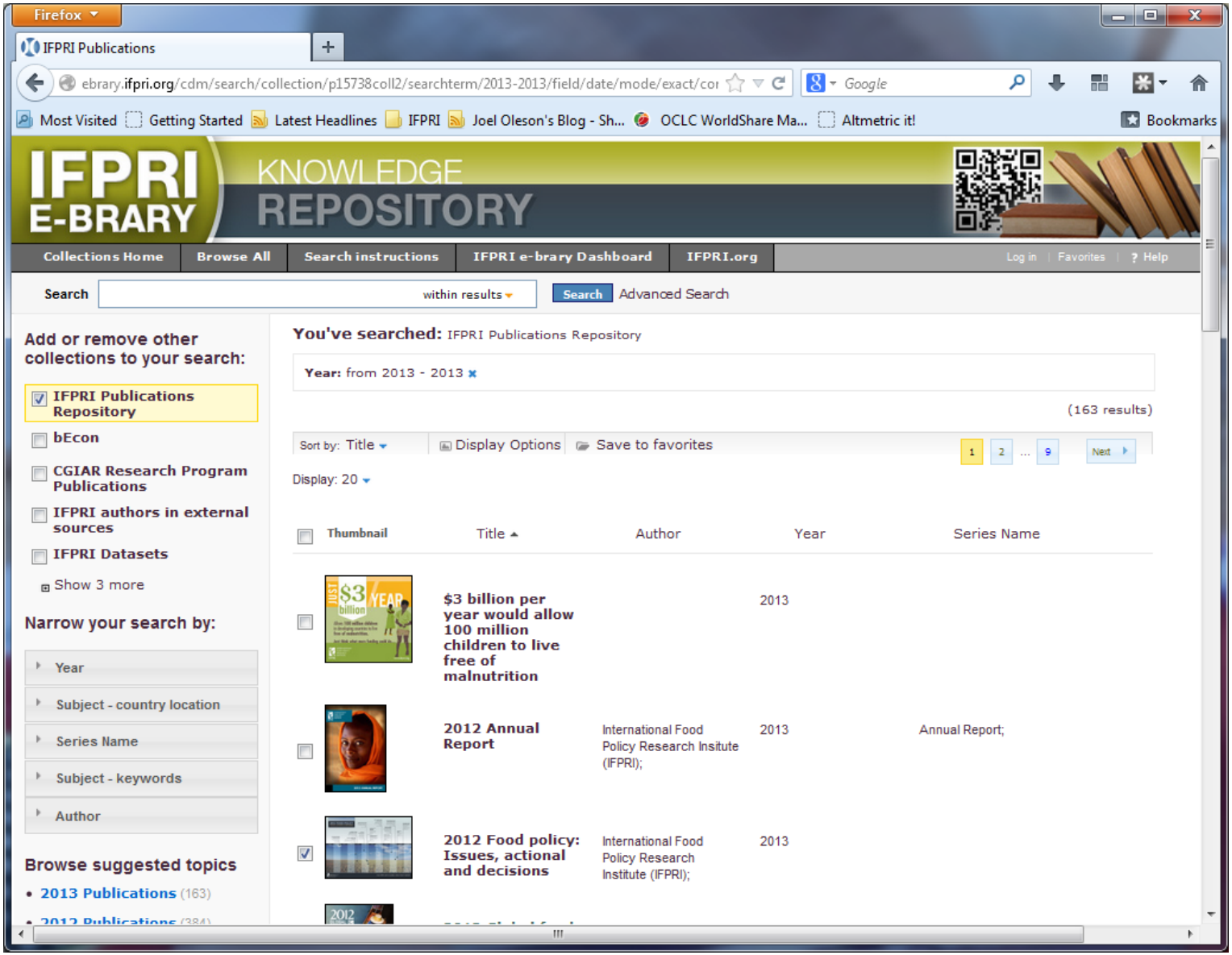
Overview: Issues

- Enhance access to IFPRI intellectual output
- Improve discoverability of records
- Reinforce relationships with partners by contributing content
- Impact measurement

Overview:
Technologies Involved

- Repository software: CONTENTdm by OCLC
- Repository APIs
- Partner websites: Drupal 7

Overview: IFPRI Repository



LandPortal: Concept

- Approached by partner, LandPortal
- LandPortal sought a way to feature IFPRI publications on their website
- We supplied the API call
  - API submits query, returns XML, which is then processed by their site

LandPortal: Technologies considered

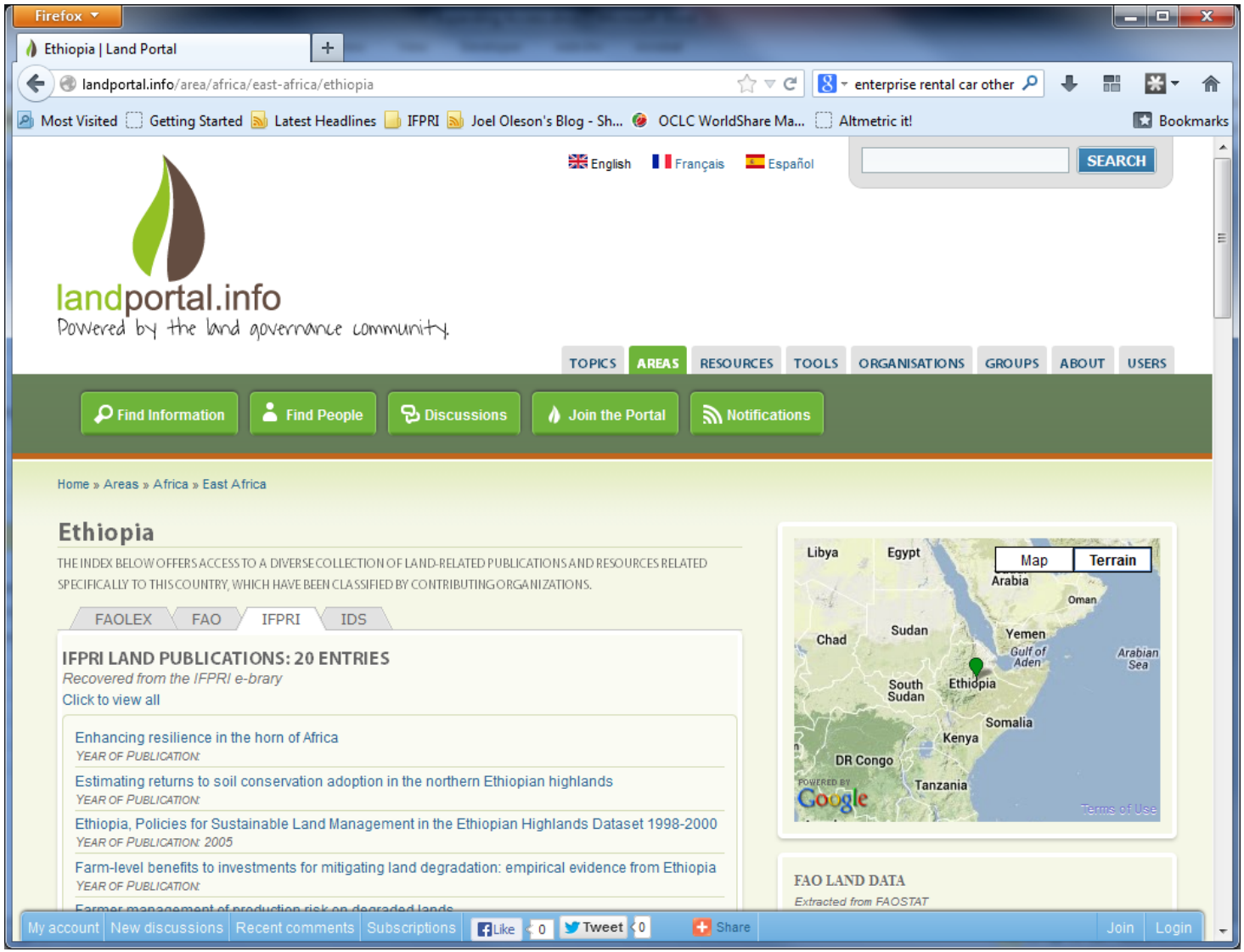
- RSS feeds
- OAI harvesting
- Repository API
  - Highly structured queries
  - Flexibility of integration into LandPortal.info

LandPortal:
Round 1 – Country location

- Query pulls records based on keyword “land” country name
- Script on LandPortal extracts process country field contents
- Displays title and a link to record

LandPortal: Countries

LandPortal: Countries



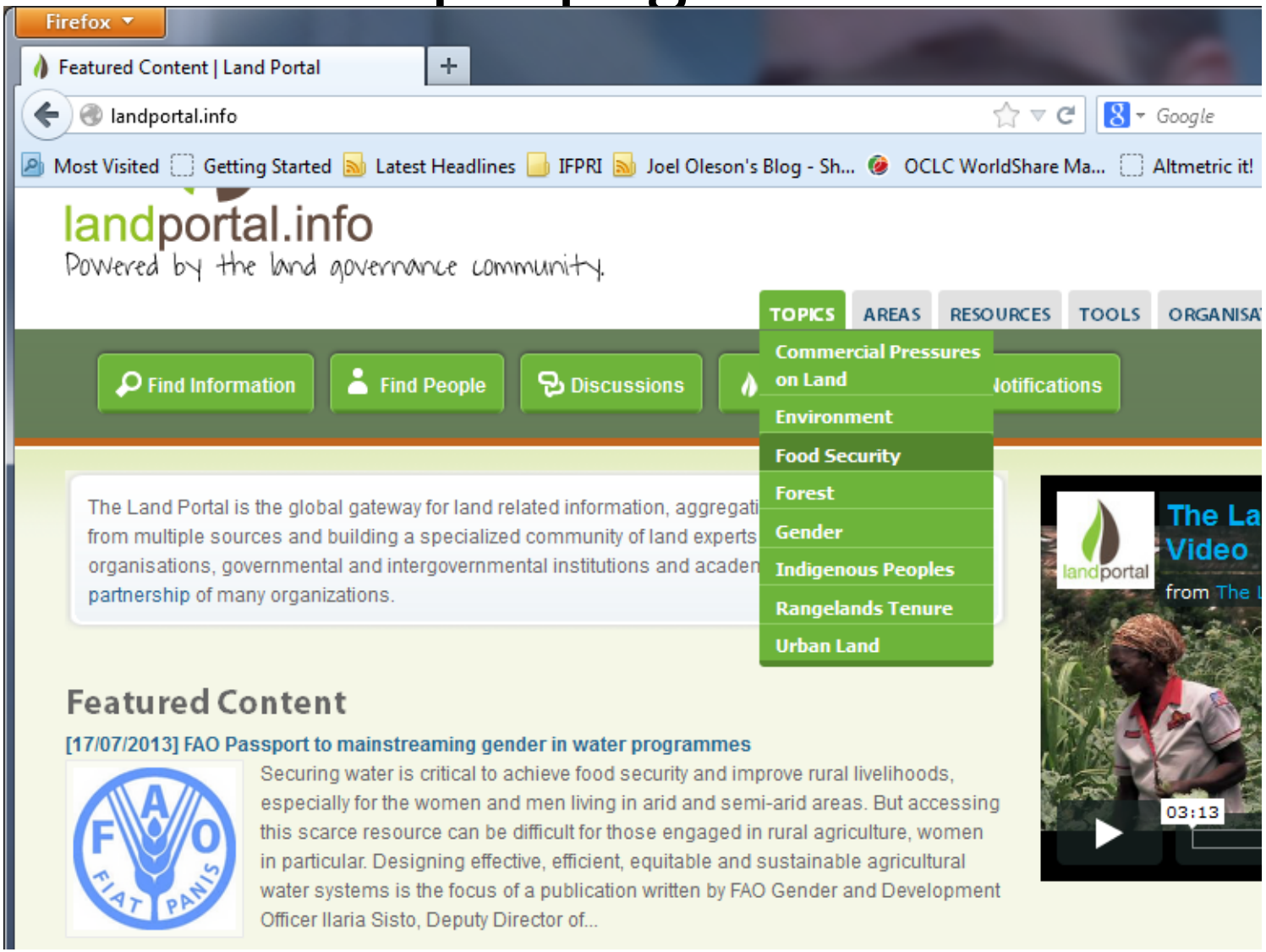
LandPortal:
Round 2 – Topic pages

- LandPortal submitted keyword search terms
- IFPRI KM aligned search terms with the keywords we used in repository
- Prepared API calls based on topic pages
- Separate API queries for every page

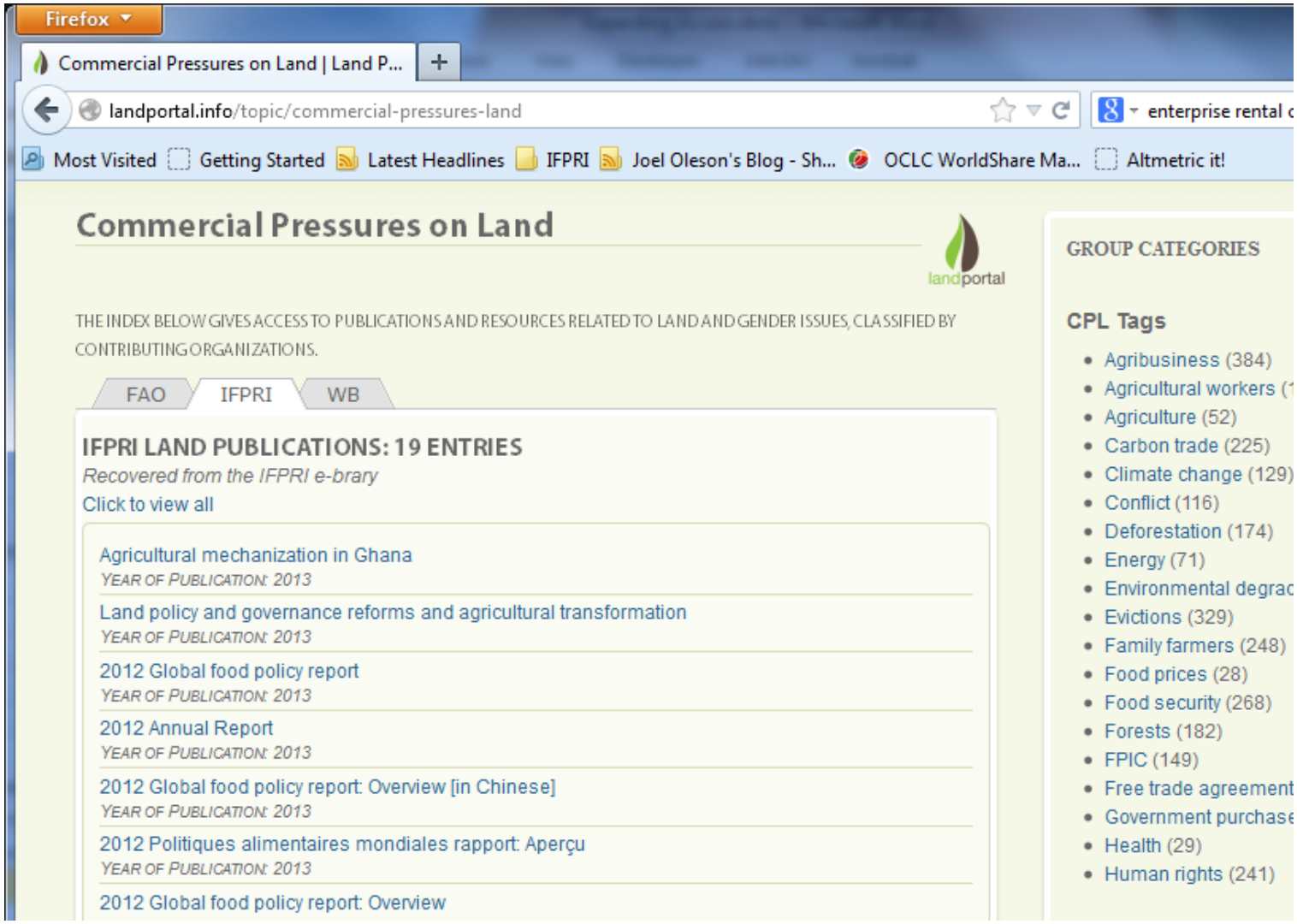
API examples

- Page: COMMERCIAL PRESSURE ON LAND. Search terms: investment OR grab OR acquisition OR conflict AND land

LandPortal example: Topic pages



LandPortal Example: Commercial pressure on land



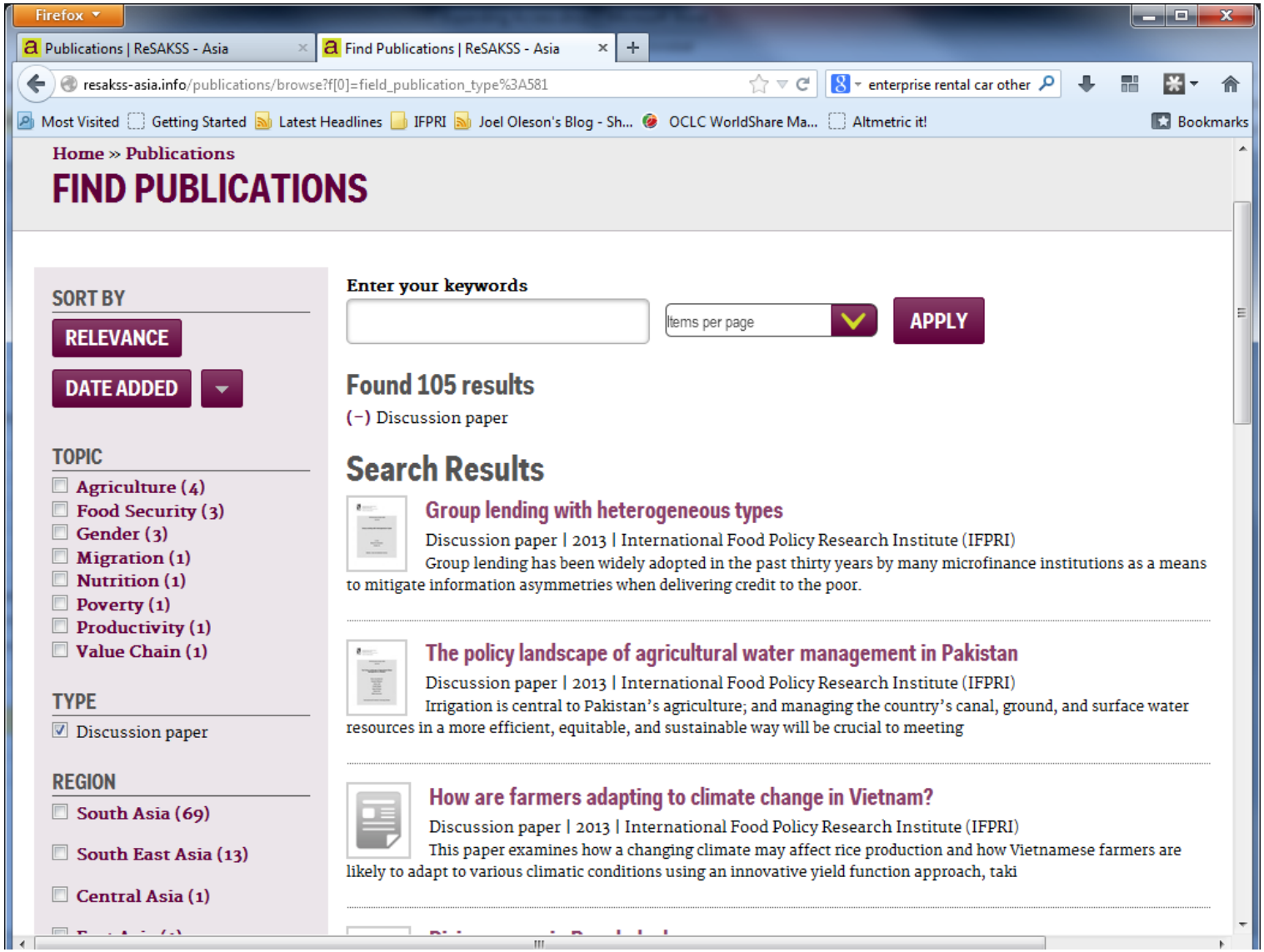
Challenges of inconsistent metadata

- Exposing metadata to outside users highlighted need for high standards
- Normalization of country location field
- Consolidation of terms in subject field

ReSAKSS-Asia

- Began as a request for advice on website design
- Instead we recommended a different design, which they implemented
- Resulted in five-fold increase in web referrals to the IFPRI repository and a superior design for the ReSAKSS-Asia site

ReSAKSS-Asia



ReSAKSS-Asia: Scenario

- Like LandPortal, they wanted to include IFPRI publications on their site
- Different from LandPortal, they also wanted to included outside sources and gray literature

ReSAKSS-Asia: Solution

- Use existing collection of IFPRI publications
- Create new collection for non-IFPRI material

Review of input and out-put policies for cereals production in Pakistan

Working paper | 2012 | International Food Policy Research Institute (IFPRI)

The marketing of farm inputs and outputs has become a major problem for farmers in Pakistan. Far
supplies are irregular, characterized by shortages and high prices at critical times.

Tajikistan: Key Priorities for Climate Change Adaptation

Working paper | 2010 | World Bank

How should Tajikistan adapt to ongoing and future climate change, in particular given the many pre
development challenges it currently faces?

Remittances and Labor Supply in Post-Conflict Tajikistan

Working paper | 2010 | The Institute of Development Studies at the University of Sussex

ReSAKSS-Asia: Solution

Advantages:

- No need to host IFPRI publications
- Using separate collection of outside materials involves the same techniques as the IFPRI publications – easy for developer to implement
- ReSAKSS team only has to enter the outside pubs

ReSAKSS-Asia: Implementation

- Use combination of API calls
  - Query to retrieve records
  - Separate API function to retrieve thumbnails

Conclusion

- Repository API flexible for partners because they retain look and feel of their sites
- Partners have access to use all metadata
- Traffic is directed to content owners, allowing easy measurement
- Easy to implement as cloud solution
- High gain for small organizations with little infrastructure

Conclusion cont.

- We learned which API functions are most helpful
- Learned to formulate queries efficiently
- We intend to use API with future partners and our own website redesign

The End

Links:

IFPRI repository main page:
http://ebrary.ifpri.org/cdm/

LandPortal: http://landportal.info/

ReSAKSS-Asia: http://www.resakss-asia.org

Building capacity of smallholder farmers in Agribusiness and Entrepreneurship skills in Northern Uganda: Presentation at the 14th IAALD world congress 22-24 JULY 2013

Dr. Basil Mugonola, Prof. C. W. Baliddawa & Mr. Walter Odongo

Faculty of Agriculture and Environment

Dept of Rural Development and Agribusiness

GULU UNIVERSITY

Presentation Outline

- Gulu University
- Faculty of agriculture and Environment – An overview
- Objectives
- Methodology
- Enterprises supported
- Progress
- Challenges
- Way forward

Gulu University

- Opened By Uganda Government in 2002 with about 200 students
- Established by Statutory Instrument No. 16 of 2003
- Serves as a launch pad for equitable development in Northern Uganda in order to:
  - Provide knowledge & skills; and
  - Stimulate innovations in education, technology, economic and social development

Gulu University: Rural transformation

Gulu University: Empowering communities

Gulu University

- **Vision:**

  "To be a leading academic institution for the promotion of rural transformation & industrialisation for sustainable development"

- **Mission:**

  "To expand access to higher education, conduct applied research & provide quality professional training for delivery of appropriate services directed towards rural transformation & conservation of biodiversity"

- **Motto:**

  "For Community Transformation"

Faculty of Agriculture and Environment

- Opened Sept. 2005 with 40 students of B. Agriculture
- Currently six Departments with Bsc. Bio-system Eng & B.Agric students; 40% academic staff capacity:
  - Agronomy
  - Animal Production & Range Management
  - Biosystems Engineering
  - Environment & Natural Resources Management
  - Food Science & Post Harvest Technology
  - Rural Development & Agribusiness

Faculty of Agriculture and Environment

- Based on four pillars of education namely:
  - *Social conscience;*
  - *Environmental commitment;*
  - *A business mentality; and*
  - *Formation of human values*.
- Emphasises participatory (hands-on) learning
  - Through in-class practicals
  - Through outreach & attachment to local farms

Objectives of outreach programme

- **Major objectives**

  Gulu University at the forefront of community transformation through sustainable agribusiness & entrepreneurial skills development in Northern Uganda

- **Specifically:**

1. Train practically oriented students in agribusiness & entrepreneurial skills
2. Build capacity of smallholder farmers in agribusiness & entrepreneurship skills.

Objectives Cont'd

3. Provide other services: Market research, MIS, Small business development model, BDS, Innovative approaches to product development
4. Strengthen linkages between Farmers, University, business community as an action platform.
5. Establish an office to coordinate the activities of the Agribusiness Expert Development Centre at Gulu University

Methodology

1. The Faculty of Agriculture & Environment outreach programme targets active resource poor smallholder farmers in a radius of five (5) Km from the University.
2. Farmers express interest by registering with the Agribusiness Development Expert Center as individuals or in groups.
3. At the time of registration, the farmers are asked to identify the area (s) where they would want the University to intervene (intervention focus)
4. The outreach coordinator then visits the farmers on fact finding mission to verify the information supplied at registration

Methodology cont'd

5. Then second year students are selected and allocated to specific farmers with in the group to work on specific enterprises during their recess term that normally takes place between June and September, every year
6. The students closely work with farmers and a university lecturer as supervisor. At the end of the attachment, the students are expected to produce a report which is graded and they are awarded marks.
7. The farmers benefit from this student-lecturer-farmer interaction by tapping knowledge from the students and lecturers.

Enterprises supported

1. Orange Fleshed Sweet potato (OFSP) production and multiplication of vines
2. Solar drying of fruits (pineapples) and vegetables
3. Management and improvement of local poultry (Chicken)
4. Groundnuts and upland rice value chains development
5. Rain water harvesting and small scale irrigation

Upland Rice production supported by Gulu University outreach program

Threshing Peanuts

Winnowing Peanuts

Peanut Value Chain Development

Women farmers at one of the bulking centers

Peanut bulking stores in Gulu

University staff assess farmers performance

Outreach staff interact with manager of bulking center

Peanuts ready for sorting

Progress of the outreach program

1. Adoption of bananas, pineapples, upland rice, peanuts & vegetables that were hither to not part of their farming systems.
2. Solar dried & packaged fruits are available on shelves in supermarkets in Gulu, with a price differential between dry and fresh pineapple products indicating value enhancement.
3. Adoption of OFSP varieties. Many products have also been developed from OFSP & are available on the shelves. E.g. farmers have developed “twin cakes”, pan cakes, potato flour etc, from OFSP.

Progress cont'd

4. Availability of planting materials from nurseries, cassava cuttings, potato vines, banana suckers, pineapple suckers etc
5. Enhancement of business skills within the communities through trainings and business clinics.
6. Improved relationship between the community & the University. The community's perception of the University has been greatly enhanced, as a partner in development.

Challenges

- Funding issues and other logistics.
- Inadequate capacity in Gulu University in terms of HR, Infrastructure etc.
- Farmers are geographically dispersed in hard to reach areas.
- Most agro-inputs are unavailable and of poor quality.

WAY FORWARD

- Facilitate formation of multi-stakeholder platforms for commodity clusters
- Diversify product development by expanding into specialty products e.g. dried Pineapples, banana wine, cassava & OFSP through improved quality, packaging & branding.
- Train farmers in business opportunity identification and exploitation.
- Encourage small scale irrigation and rain water harvesting for increased production of high value crops.

.....WAY FORWARD

- Link Agro-input dealers to farmers & other stakeholders in the value chains.
- Train local banks (SACCO), in agribusiness skills, resource mobilization, collateral options & risk mitigation.
- Train community members on improving savings & Credit management & encourage VSLA: Voluntary Savings & Learning Associations
- Student supervised enterprises (students initiate business innovations with faculty support for posterity)

Acknowledgments