Performance of two adult learning models in enhancing farmer water management skills in Pakistan

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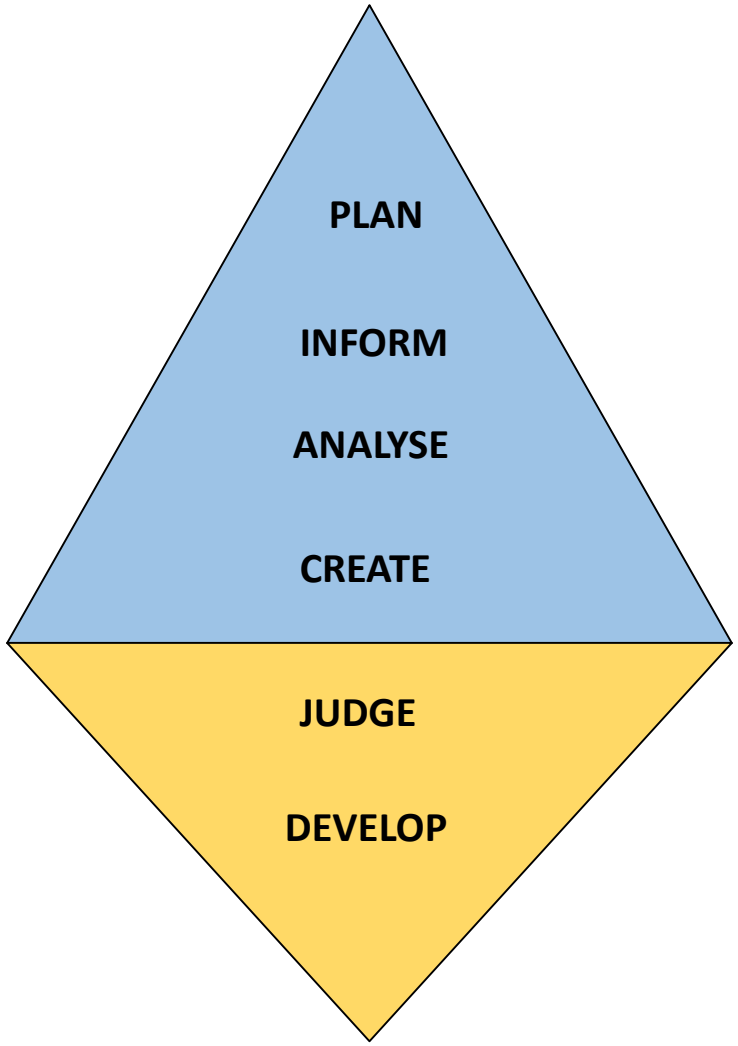
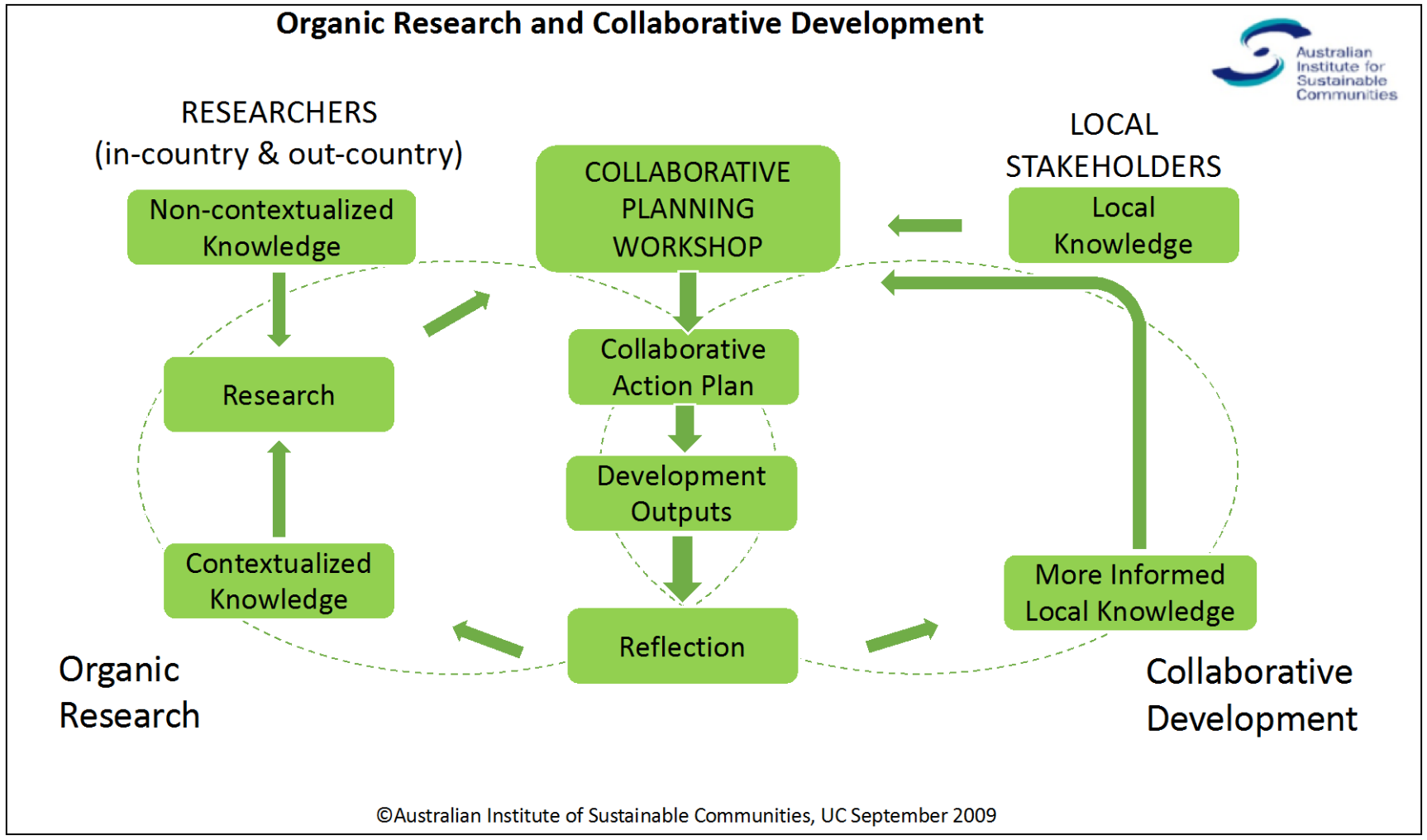
Value Management



Osterwalder, A., Pigneur, Y., Bernarda, G., & Smith, A. 2014. *Value proposition design*. NJ: Wiley.

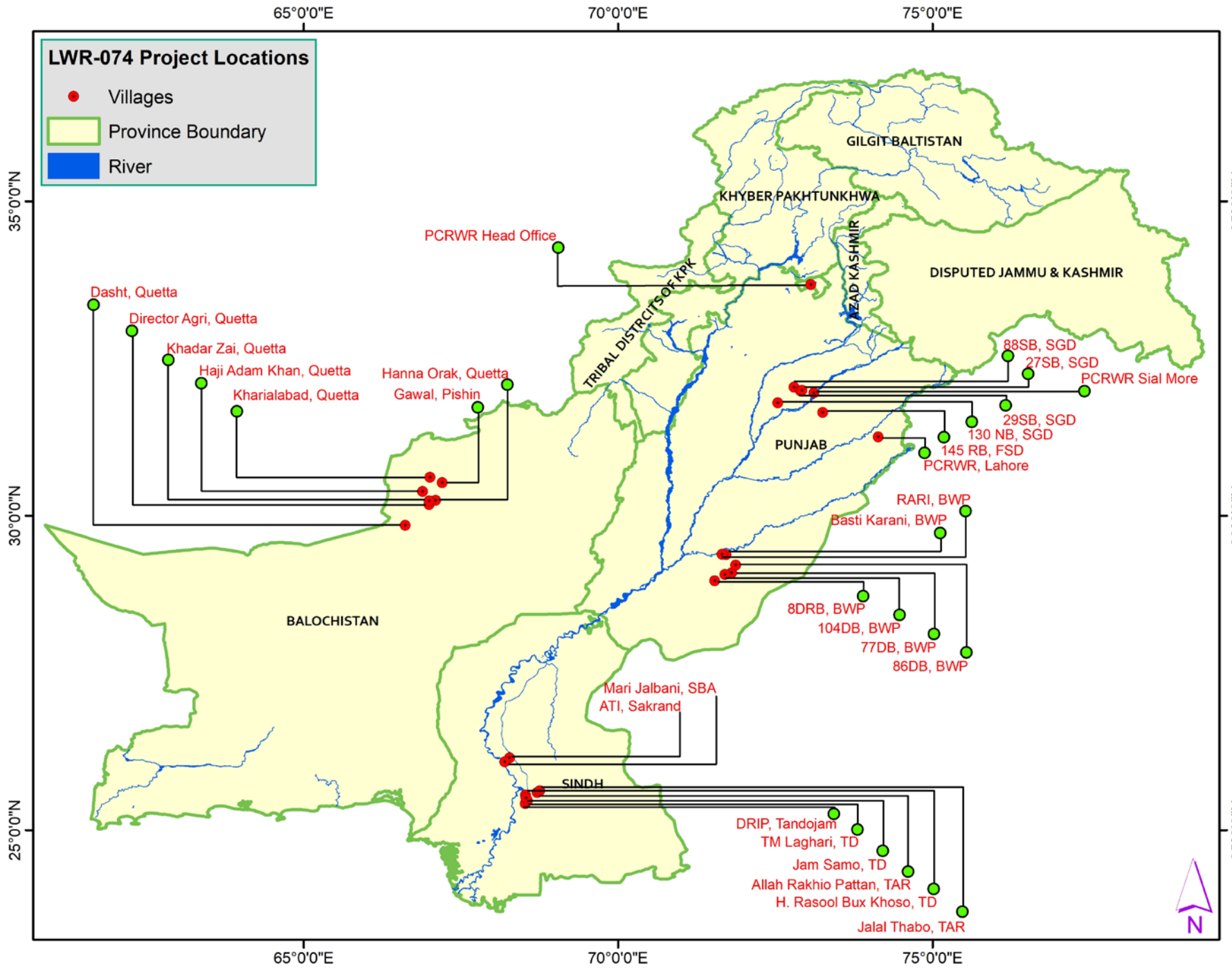
Organic Research and Collaborative Development



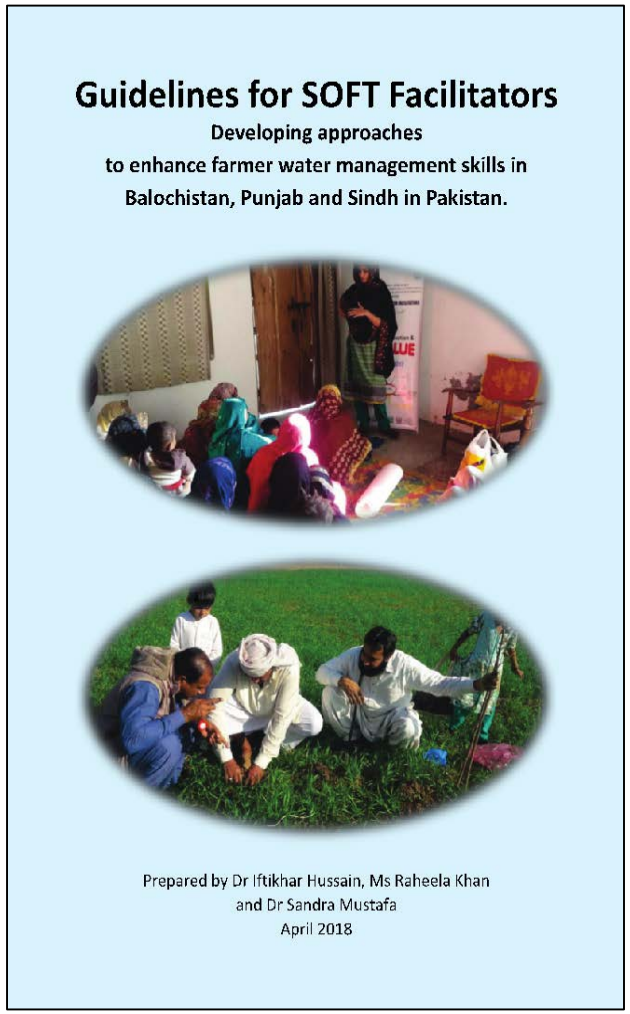
Spriggs, J., & Chambers, B. 2011. Organic research and collaborative development (ORCD) of horticultural supply chains in Asia-Pacific. *Stewart Postharvest Review, 7*(2): 1-9. doi:10.2212/spr.2011.2.2.

Study Sites

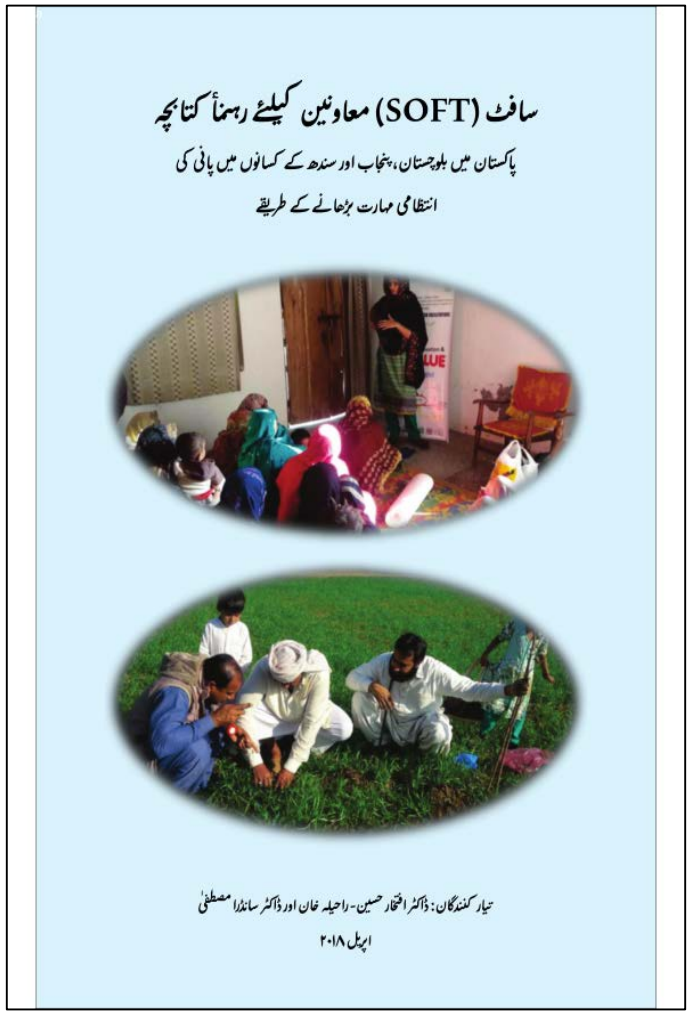
Province	District
Punjab	Bahawalpur
	Sargodha
	Faisalabad
Sindh	Tandojam
	Shaheed Benazirabad (Nawabshah)
Baluchistan	Quetta/Pishin



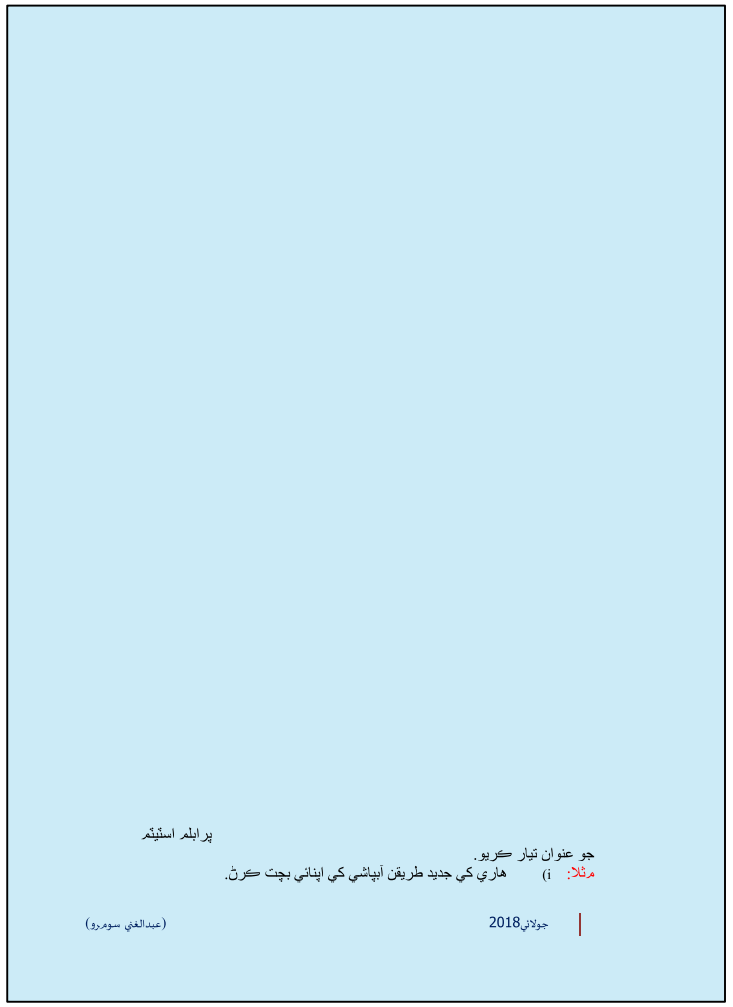
Translation of Learning Material in to Urdu and Sindhi



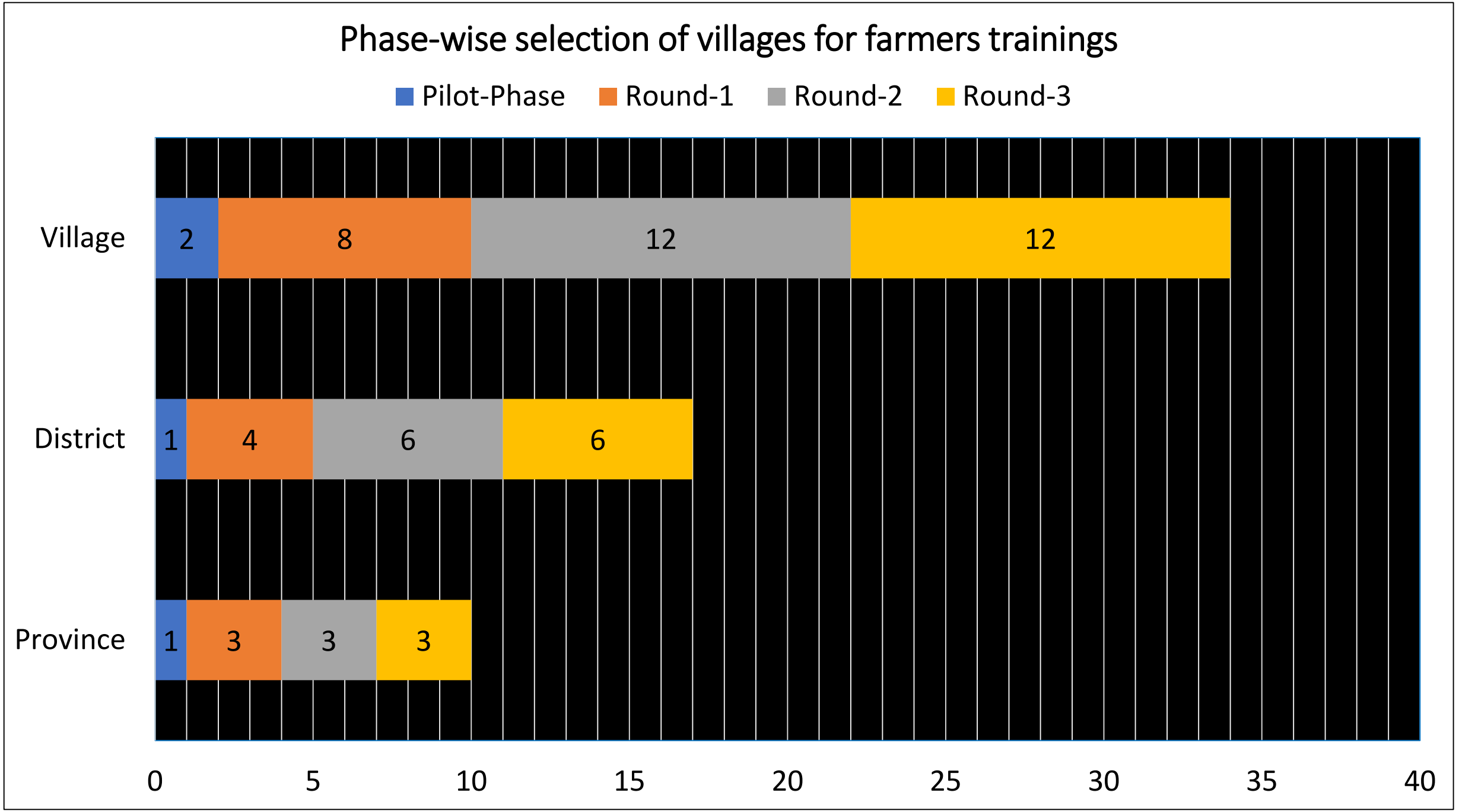
ENGLISH



URDU



SINDHI


Phase-wise selection of villages for farmers trainings
Pilot-Phase
Round-1
Round-2
Round-3
Village
2
8
12
12
District
1
4
6
6
Province
1
3
3
3
0
5
10
15
20
25
30
35
40

Training of Facilitators: 79 (48 Men and 31 Women)

Canberra (Australia)

Bahawalpur (Punjab)

Tandojam (Sindh)

Nawabshah (Sindh)

Sargodha (Punjab)

Quetta (Baluchistan)

Farmers Training: 911 (496 men & 415 women)

Province	District	Value Management			Organic Research & Collaborative Development		
		Village (n)	Farmer (n)		Village (n)	Farmer (n)	
			Men	Women		Men	Women
3	6	17	239	186	17	257	229

Key elements of both models

- Valuing the villagers'
  - Capacity
  - Knowledge
  - Village resources
- Valuing facilitators', scientists', engineers' and other stakeholders'
  - Capacity
  - Knowledge
  - Village resources

DIFFERENT BUT EQUAL

Women Learning - Kitchen Gardening

- Field Cultivation



- Arable land converted to vegetable plot


Women Learning-
Kitchen Gardening

- Cultivation in home lawns

Women Learning - Kitchen Gardening

➢ Pot Cultivation

Women Learning - Kitchen Gardening

- Irrigation conservation practices (small-plots, beds and furrows)

Women Learning - Kitchen Gardening

➢ Use of soil-moisture and soil-nutrients monitoring tools

Chameleon reader shows soil moisture at four depths.

FullStop Wetting Front Detector for measurement of salt and nitrate .

Tensiometer for assessment of soil moisture.

Women Learning - Kitchen Gardening

- Produce sharing with friends and relatives

- Dry preservation for off-season use

- Money Saving

Women Learning

- Setting up vocational training facility on self-help basis for skill development in tailoring and embroidery

- Awareness sessions on water related health issues and diseases

Men Learning

- Cultivation of less-water intensive crops i.e. Mung beans, Canola

- Irrigation Conservation Practices: Laser land levelling, Bed and Furrow cultivation

Men Learning Mulching and Compost Preparation

Men Learning

Use of soil-moisture and soil-nutrients monitoring tools

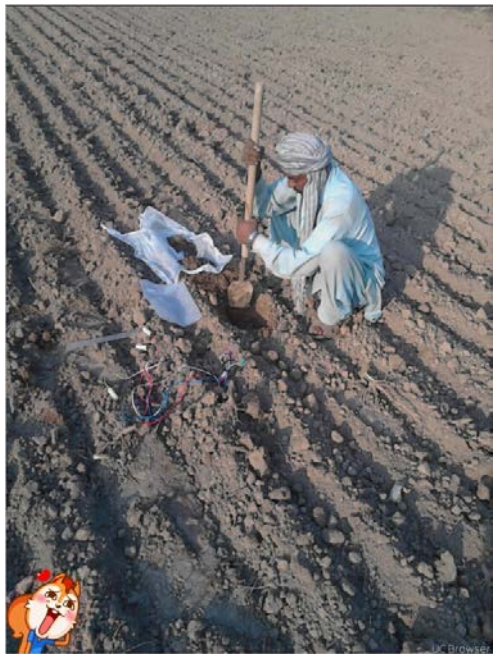




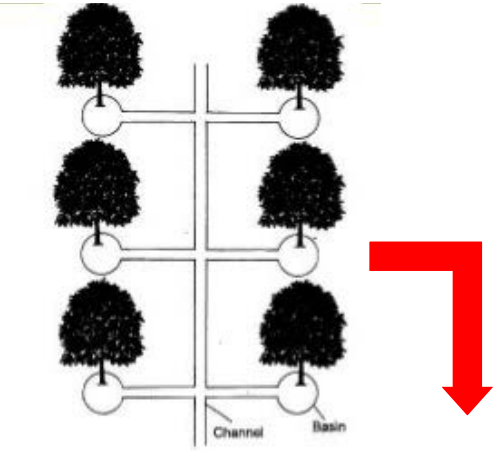


Men Learning

Soil Sampling for Analysis



Men Learning



Self-supported process:

Irrigation conservation and management of gummosis disease in citrus orchard

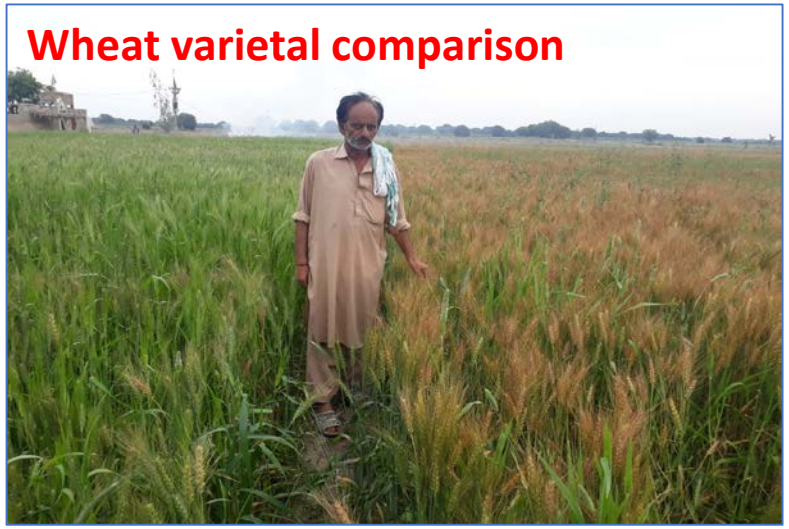
Men Learning

Cultivation of high value crops

Cotton seed production

Onion seed production

Wheat varietal comparison



Challenges

- **Low literacy** was a hindrance in meeting procedural requirements of the learning models i.e. preparation of flip charts, record keeping, wearing DeBono hats etc.

- **Time**: participation in 3-4 hrs sessions for 2-3 consecutive days was in conflict with famers' daily work schedules of crops & livestock management, social & domestic affairs.

- **Women participation** varied with regional cultures: good in Seraiki satisfactory in Sindhi & Punjabi and poor in tribal Baluchi culture.

Lesson learned

- Farmers learnt to value their resources, brainstorming on new ideas and develop action plans.

- Irrigation conservation methods supported with tools proved interesting.

- Relative acceptance for ORCD was better than VM model.

Outcome

- Famer-accepted elements of the learning models supported to design a new model (Farmer Integrated Learning Model, **FILM**) for further assessment.

Thank you