- Inclusion of PID into larger training and implementation programmes linked to food security

MONITORING AND EVALUATION

Activities

- Set up learning groups for each LM (4x30ind)
- Elect and train 4 local food security assistants per LM. Each supports 30 hh and 1 group project
- Run the learning group training and interventions
- Select 40 beneficiaries per LM to receive RWH tanks
- Link and work with local clinic gardens, school gardens and feeding schemes, NGO and CBO initiatives
- Towards the end of yr 1, select beneficiaries for 2 yr.....

Learning needs assessments

- It starts with the **generic** (which is broad enough to cover the overall topics in most contexts);
- Followed by an **approximate contextualisation (**for instance, according to the local natural resource base); and
- Then eventually, **specific training needs are defined** only once the learning group has been formed and prior learning of the participating households established.

Learning Groups

Learning group process

- For individuals supported by a group
- Over a period of time in the community
- 3-5hr sessions every 3-6 weeks
- Always review previous session and assess practical implementation
- Practical demonstrations on site
- Materials provided for experimentation
- Written materials and visual aids (local language, posters, DVDs, calendars etc)
- Ideas and technologies introduced
- Ongoing support by community level facilitators

- **Demonstrations of new ideas**
- **Practical implementation in the workshop**

Practical demonstrations and farmer experimentation

Area► Implementation▼	uHaza	Mashingeni	Gezobuso	Vulisaka	Mbhizane	Mafundze	Average
No of people attend trg in area	140	39	37	22	93	48	**379 (total)**
Trench beds	100%	100%	100%	100%	83%	83%	**94%**
Mixed cropping/ crop rotation	50%	50%	25%	67%	56%	50%	**50%**
Clear paths, use of kraal manure	100%	100%	100%	100%	83%	83%	**94%**
RWH ditches	20%	20%	94%	83%	83%	83%	**64%**
Liquid manure	90%	90%	92%	100%	83%	83%	**90%**
Wind break	30%	20%	17%	50%	33%	33%	**31%**
Mulching	0%	0%	34%	67%	33%	33%	**28%**
Natural pest and disease control	0%	0%	92%	33%	83%	83%	**49%**
Farmer experimentation	90%	90%	92%	100%	83%	83%	**90%**
Food from the garden (no of times/ week)	2.5 x/wk	2 x/wk	3 x/wk	2 x/wk	1.6 x/wk	2 x/wk	**2.5 x/wk**
Selling from garden	70%	40%	92%	67%	17%	17%	**50%**
No of trgs attended; ≥3 of 5	20%	36%	49%	32%	37%	13%	**31%**
Fruit trees to homes monitored	73%	90%	92%	67%	77%	67%	**78%**
Comments per area	Large, disparate grp, some interest	Small grp, waning interest	Coherent community garden grp	Comm garden,little interest	Large coherent grp	Large, disparate grp, little interest	

- CA indicators and scoring
- VSA- Visual Soil Assessment
- PES- Payment for Ecosystem services

MONITORING AND EVALUATION; CA PROGRAMME

Local monitoring of visual indicators

- Indicators have been chosen that can be monitored visually and throughout the growth season of the crop. The intention is twofold:
- To assess different indicators for their reliability ,robustness, sensitivity to change in management practices and
- To design a system that can be locally implemented by facilitators and farmer.

- ***% soil cover at planting*** (From 0% - no cover to 100% full cover); Cover of the soil looking from above- can be crop residue, weeds, mulch, grass etc)
- ***% crop canopy cover at 6-8 weeks*** (From 0% - no cover to 100% full cover); Cover of the soil looking from above- crop cover/ canopy) – *a new indicator*
- ***% Weed infestation*** (0%- very high weed incidence, complete yield loss; to 100%- no weeds zero yield loss)
- ***% Pest occurrence*** (0%- very high infestation , complete yield loss, to 100%- no insect pests and zero yield loss)
- ***% growth*** ; (germination, colour, height, health)
- ***% growth of cover crop*** (from 0% – not planted or not germinated to 100% full germination and excellent growth) – *A new indicator that has been included this year, but not yet added to the overall score for each participant*

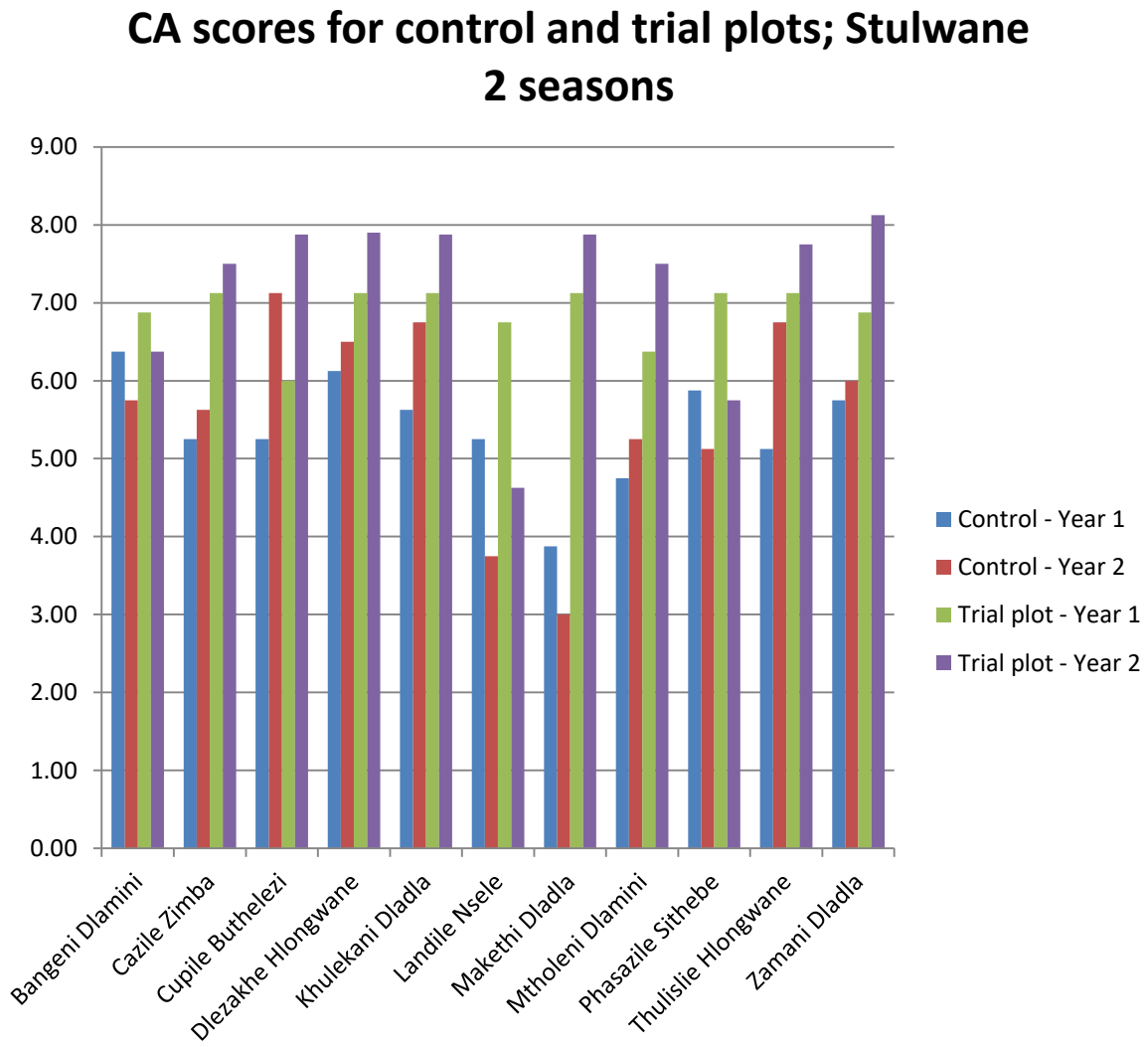
CA Scores for Matatiele; 2015

Row Labels	Values Runoff	Average of Cover crops	Average of %Cover (at planting)	Average of % Weeds (0%) – high weed infestation – to (100%) no weeds,	Average of % pests (0%) bad- (100%) –	Average of % growth (germination, colour, height, health)	Average of Overall score (10)
Lelatso Thuso	1	70%	10%	75%	85%	30%	5
Bulelwa Dzingwa	1	10%	15%	75%	85%	65%	6
Mahutlong Dodo	0	1%	10%	65%	90%	70%	5,9
Majaokbo Sabasaba	0	0%	8%	15%	90%	20%	3,3
Mamolelekeng Lebuoea	1	100%	10%	90%	80%	80%	6,5
Manapo Moshoeshoe	1	1%	5%	55%	80%	60%	5
Manyalleng Sikhosana	1	70%	10%	70%	85%	70%	5,9
Matshepo Futhu	1	60%	10%	55%	85%	65%	5,4
Mohajane Kanetsi	0	1%	10%	15%	80%	75%	4,5
Mongezi Bhekaphezulu	2	0%	8%	40%	80%	55%	4,6
Nkosiyamankwali Maqungo	0	0%	5%	25%	80%	40%	4
Nokuphiwa Phekula	1	0%	5%	10%	90%	35%	3,5
Nthabiseng Moshoeshoe	1	0%	10%	35%	80%	65%	4,8
Siyabonga Maqungo	0	0%	5%	10%	80%	10%	2,6
Thabiso Dihollo	0	0%	13%	45%	78%	75%	5
Tsolonae Mapheele	2	55%	15%	63%	85%	58%	5,5
Grand Total	**12**	**21%**	**10%**	**45%**	**83%**	**54%**	**4,8**

A comparison of scores over 2 seasons for Stulwane; Bergville

- Control plot scores are lower on average than the trial plots

- Trial plot scores for the 2nd year are higher than for the 1st year. This is expected due to better management of trials by participant farmers as they get used to the process and are able to improve



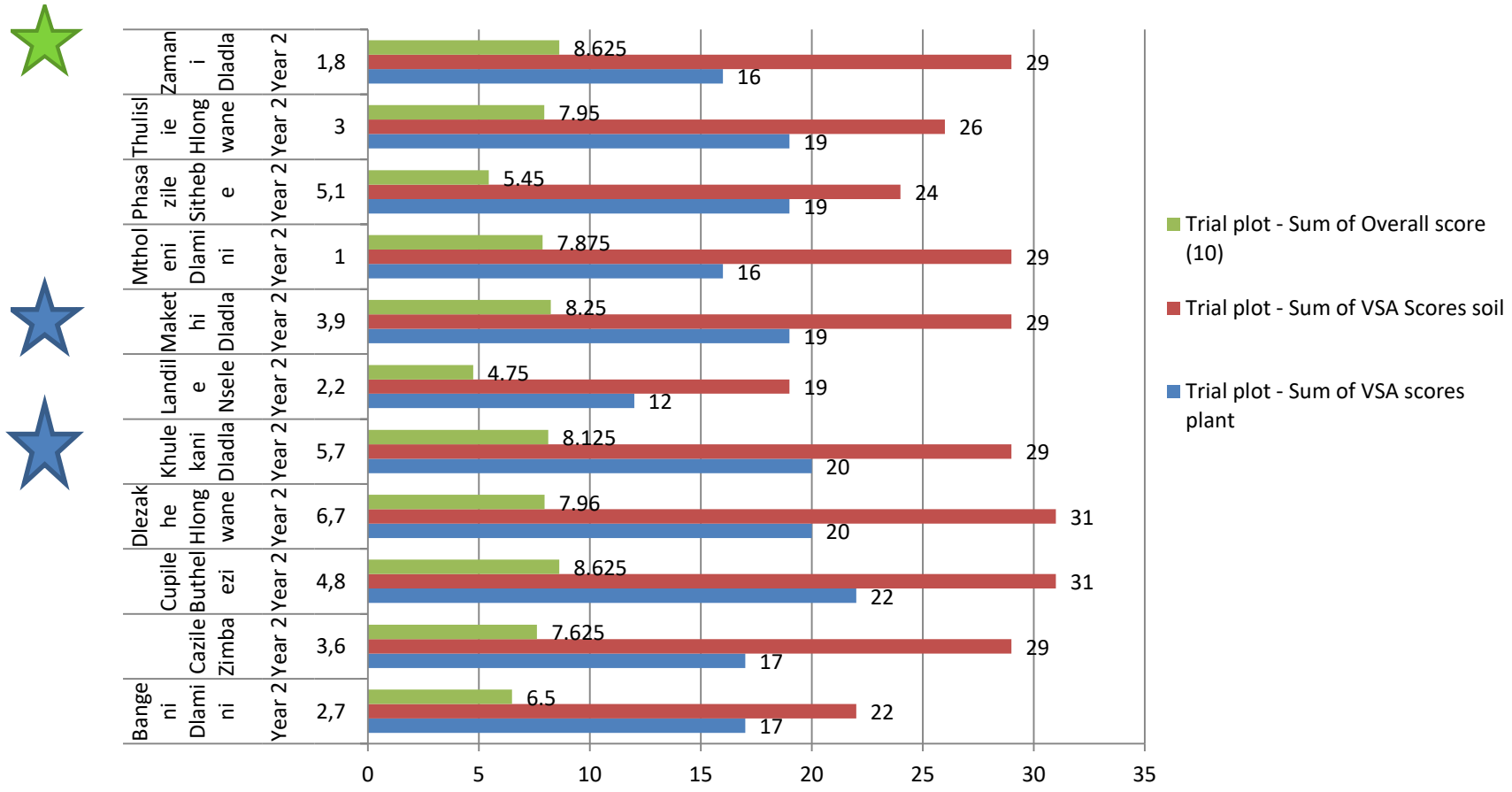
VSA; Visual soil assessment

Visual indicator of Soil Quality	Visual Score (VS) 0 = Poor conditions 1 = Moderate conditions 2 = Good conditions	Weighing	VS Ranking
Soil Structure		× 3	
Soil porosity		× 3	
Soil colour		× 2	
Number and colour of soil mottles		× 1	
Earthworm counts		× 2	
Soil cover at planting		× 2	
Crop cover at 6-8 weeks		× 2	
Soil depth		× 2	
Run-off		× 2	
Ranking Score (sum of VS rankings) Max =38			

Crop emergence (% germination)		× 3	
Crop growth and height (%; overall growth and colour- relative height at time of assessment)		× 3	
Weed infestation		× 2	
Crop yield		× 3	
Size and development of root system		*× 2*	
Surface ponding / water infiltration		*× 2*	
Production costs		*× 2*	
Ranking Score (sum of VS rankings) Max =22			

Combination of yields, CA scores and VSA

	CA monitoring scores	VSA Soil scores	VSA plant scores	Yields
Above average	≥7	>28	>15	3-8.9 tons/ha
Average	5-6.9	11-28	7-15	1-2.9tons/ha
Below average	3-4.9	<11	<7	≤1ton/ha



Gardening process	No (N= 12)	NOTES
Dedicated beds with paths	6	- Not walking on beds, placing manure over entire bed – increases soil structure, fertility and water holding capacity
Use kraal manure	8	
Making compost	6	- Mtubatuba households have been taught composting – not used in other areas
Trench beds	5	
Key hole gardens	1	- Msinga – rocky area with severe water restrictions.
Liquid manure	8	
Natural pest control	9	Examples include: - Identifying pests and pest predators -using ash for ants - making brews from indigenous plants - mixed cropping
Planting different vegetables	10	Also- planting and caring for seed and seedlings -planting seed in trays, bottles nad other containers for germination before transplanting.
Planting in different seasons	3	
Mixed cropping	7	
Water conservation	8	Including; - mulching - using grey water - making run-off ditches at the top and bottom of the garden
Assistance with infrastructure	8	Due to students being involved and part of an organisation and through their express motivation and help.
Seed saving	6	

Some images

Clockwise: Keyhole garden in Msinga, sask garden (KwaHhoho), Banan circle (Khula Village), orange fleshed sweet potato, avocado trees, mixed cropping- maize, sorghum, imfe, cowpeas and cassava.

We have learnt to produce our own food in stead of just buying all the time. (Khula)

Before, we did not have a garden since there was no water. With the help of the student we started making a garden and got knowledge on rain water harvesting. (Msinga)

Information and relationship with the students has helped us a lot. We are now planting our own garden, saving money and eating a variety of vegetables. The money we get from selling vegetables is used for other household needs.(KwaHhoho)

We have improved our care practises for ourselves and our children; eating more fresh food and treatment of infectious diseases such as diarrhoea. (Msinga)

Thank you