

Team Xh'ara
September 6, 2017

Xh'ara hii ba Business Model



1. Pricing

MATERIALS AND COSTS		PULA
Production costs		
Capital	Spades	20
	Square tubing (seed/fertilizer pipes + foot pedal)	37.8
	Circular tubing (handles)	18
	Metal plate for dispenser	34
	Cutting boards (2)	35
	Wooden slider	2.5
	Bottle adhesives (plastic electricity box casings)	1
	Screws	2
Recycling	Bottles	0
	Spacers	0
Running costs	Electricity	100
	Transportation to Ghanzi x 3 (fuel + wear and tear)	62.5
TOTAL		312.8
Mark up (profit)		
	Labor (2 hours)	
	- Welding	
	- Cutting	
	- Filing	
	- Drilling	123.48
	D'kar Innovation Center (10% of profit)	
TOTAL		137.2
SELLING PRICE	Production cost + mark up	*450

*Based on the desired profit for the producer, P120 (2 hours of labor), the original selling price was P447. Values above are based on the decision to round the selling price up to P450.

2. Business models

Model	Distribution center	Pricing (P)
Selling	D'kar Innovation Center	Individual - 450
	Hardware stores (GFS, etc.)	Individual - 450
		Bulk sale (at least 5) - 375-400
	Government	Questions: <ul style="list-style-type: none"> - how do they see tech fitting into their current schemes - if it can fit, are they able to support us to produce it (take care of costs) for other farmers - in a position to subsidize farmers who use it to plough for themselves and others
Renting	D'kar Innovation Center	Scenario 1: 1 day rental --> 10 people needed to make P450 Scenario 2: 2 day rental --> 5 people needed to make P450

3. Competitor analysis

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Target market

The target market would be small farmers located in the Ghanzi district, inclusive of D'kar, totaling of 9,934 people, with up to 1ha of land in cultivation.

Current methods

Current farming methods require the use of spades and hoes. This method typically requires two people—one person creates the holes and another person deposits the seed. Implement costs would require a hoe head (P80), hoe handle (P80), and a spade (P200), totaling to P360.

Value proposition

1. Adjustable: fits various seed sizes
2. No clogging: No issues with clogging
3. Controlled seed and fertilizer deposition – 2 or 3 seeds deposited and 5 to 10 grams of fertilizer/seed
4. Ergonomics
 - a. Optimal height, no bending required (height of handle and foot pedals) - 1 height fits all
 - b. Optimal weight 3.5kg without seed/fertilizer
 - c. Handles are perpendicular and parallel to the user, allowing for the most comfort in use
 - d. Generally fits people of all ages and genders
5. Ease of use
 - a. Requires 1 person to use
 - b. Foot pedal helps with penetration of the soil
6. Ease of make
 - a. Low cost – P313/\$31.3USD to produce
 - b. Requires 1 person at the rate of P120 for 2 hours of labor
7. Seed depth control – 2 to 8 cm of depth control
8. Speed – dispensing mechanism of seed and fertilizer at the same time

4. User feedback

From residents of D'kar

“This technology gives me hope.”

“This is something I've been waiting for.”

“Good for rocky subsurface”

“Appreciates minimum tillage”

“Heart full of excitement”

“Looking forward to working with us”

“Good for under-resourced people”

“Good for home use”