Farmer Willingness to Pay for Quality Chickpea and Green Gram Seeds—Myanmar 2018 Survey

Study Documentation (Meta Data and Codebook)

August 2024

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Farmer Willingness to Pay for Quality Chickpea and Green Gram Seeds—Myanmar 2018 Survey

Overview

A simple way to increase smallholder farmers' crop yields is to improve the quality of the seed used. Improved seed quality should lead to higher germination rates, better pest resistance and an overall healthier and more vigorous plants and thus higher yields. The use of higher quality seed in a smallholder context can be hampered by several factors including availability, perception of the seed quality, and the price premium required to purchase. This dataset is based on a study that focused on the latter two factors and investigated farmers' willingness-to-pay (WTP) for quality legume seeds representing three different seed systems—formal, semi-formal, and informal. The experiment was designed to measure the effect of quality signaling conveyed in the information about the type and source of seeds. This set includes data from the WTP experiments, seed quality ratings by farmers during the WTP experiment, and farmer survey conducted after the experiment.

Unit of Analysis	Farmer

Scope & Coverage

Countries	Myanmar

Geographic Coverage
11 villages of Kyauk Se and Myit Thar townships in the Mandalay region

Universe
Chickpea and green gram growing farmers in the selected villages in Myanmar

Producers & Sponsors

Food Security Policy Project (FSPP), an Associate Award funded by USAID-Burma to the Feed the Future Innovation Lab for Food Security Policy

Methodology

Sampling

The WTP experiments were implemented in 11 villages of Kyauk Se and Myit Thar townships in the Mandalay region, that falls in the Central Dry Zone of Myanmar where chickpea and green gram are mainly cultivated. These 11 villages were sub-sampled from a household conducted in the previous year which was representative of eight townships in the Central Dry Zone. They include the townships of Myinmu and Monywa in Sagaing Region, the townships of Magway and Pwint Phyu in Magwe region, and the townships of Madaya and Kyaukse in Mandalay region. The WTP experiments were conducted for each crop in a group setting. In villages that grew both chickpea and green gram, WTP experiments were conducted in two sessions—one for each crop. The data set includes farmer observations across

eighteen experimental sessions in eleven villages, with an average of 25 farmers for chickpea and 30 farmers for green gram per session. In total, the sample includes 254 farmers for chickpea and 258 farmers for green gram. The crop order of the experiments was randomized to avoid ordering effects.

Experiment design

The study employed the Becker-Degroot-Marschak (BDM) method, an incentive-compatible bidding experiment, to elicit farmers' WTP for different seed types. The BDM experiment consisted of two rounds of bidding and quality ratings, alongside a structured survey.

Five seed products presented to farmers include: two recycled seed types representing the informal seed system (1. farmer-produced and managed seeds, 2. market-purchased seeds sold as seed) and three certified seed (CS) types representing formal and semi-formal seed systems (3. government-supplied CS, 4. CS from a private company, 5. CS from a farmer seed enterprise (FSE)). The experiment used a full bidding approach, where participants bid simultaneously on all seed products.

CS from the government (product 3) was procured from the Madayar township office of the Department of Agriculture, Mandalay region. CS from FSE (product 5) came from an FSE working with the Integrated Seed Sector Development (ISSD). Since no company-produced seeds were available, FSE seeds were used as the company seed (product 4) to measure the effect of quality signaling related to seed source (company vs. FSE).

The study used Yezin 14 for green gram and Yezin 6 for chickpea, popular varieties in the study area. The same variety was used across all products and rounds. The BDM experiments were conducted in the local language, following a script for consistency across experiments. The procedure included explaining the BDM method to the group, conducting a practice round with a non-focal product (toothpaste), and then proceeding to rounds 1 and 2. In each round, participants submitted their maximum WTP on a bidding sheet, followed by quality ratings of the products. All seed products were displayed in containers or packages holding one pyi of seed, which participants could inspect but not discuss.

Participants bid on all five products in round 1 and all eight products in round 2, but only one product was selected for sale. This rule was explained at the outset to encourage true valuation bidding. For logistical reasons, the highest quality seed (from FSE) was pre-selected as the binding product. A coin toss determined the binding round, and if round 2 was selected, a random choice between FSE with or without a lab test label was made. The lab test results were provided when packaged CS seeds with a lab test label were selected as the binding product. Finally, a random price was selected, and farmers purchased the seed if their bid was equal to or higher than this price. The survey concluded with interviews to collect individual and household data.

Full protocol of the experiment is described in the script included in the data set. The script file includes—the description of the practice round, the description of the two rounds with the seeds, type of information conveyed in each round for each product, the method of selecting the binding round, and the method of drawing the random price.

Data Collection

Data Collection Mode	Data was collected using the traditional paper-and-pen-interview (PAPI) method based on structured questionnaires.
Time frame	August 2018

Files Description

Dataset contains 10 file(s)

sec a	
# Cases	512
# Variable(s)	19

sec b	
# Cases	512
# Variable(s)	19

sec c	
# Cases	512
# Variable(s)	16

sec d	
# Cases	531
# Variable(s)	14

sec e	
# Cases	512
# Variable(s)	11

sec f	
# Cases	2560
# Variable(s)	8

sec p	
# Cases	3072
# Variable(s)	7

sec z	
# Cases	512
# Variable(s)	7

round1_bids	
# Cases	2565
# Variable(s)	11

round2_bids	
# Cases	4104
# Variable(s)	11

CODE BOOK

For each file, we include the codebook with list of variables and variable labels

File name: sec a.dta

---

uid unique ID

Type: Numeric (float)

Range: [1012,12172] Units: 1
Unique values: 512 Missing .: 0/512

Mean: 6311.39
Std. dev.: 3249.86

Percentiles: 10% 25% 50% 75% 90%
2121 3186.5 6371.5 8316 11101

---

fid farmer id

Type: Numeric (byte)

Range: [1,63] Units: 1
Unique values: 54 Missing .: 0/512

Mean: 17.5117
Std. dev.: 11.9578

Percentiles: 10% 25% 50% 75% 90%
4 8 16 25 32

---

villageid village ID

Type: String (str3)

Unique values: 17 Missing "": 0/512

Examples: "12G"
"3C"
"6C"
"7C"

---

cid crop ID

Type: Numeric (float)
Label: cid

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/512

Tabulation: Freq. Numeric Label
254 1 Chick Pea
258 2 Green Gram

---

a1 Can you read and write?

Type: Numeric (byte)
Label: a1

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/512

Tabulation: Freq. Numeric Label
507 1 Yes
5 2 No

---

a2 Your highest level of educational attainment?

Type: Numeric (byte)

Range: [0,12] Units: 1
Unique values: 13 Missing .: 9/512

Mean: 4.9662
Std. dev.: 2.89608

Percentiles: 10% 25% 50% 75% 90%
1 4 4 7 10

---

a3 Total number of household members

Type: Numeric (byte)

Range: [1,11] Units: 1
Unique values: 10 Missing .: 1/512

Mean: 4.3092
Std. dev.: 1.51408

Percentiles: 10% 25% 50% 75% 90%
2 3 4 5 6

---

a4 Your relationship with the head of the HH?

Type: Numeric (byte)
Label: a4

Range: [1,3] Units: 1
Unique values: 3 Missing .: 1/512

Tabulation: Freq. Numeric Label
292 1 self
179 2 spouse
40 3 other
1 .

---

a5 How many acres of agricultural land does your household own?

Type: Numeric (float)

Range: [0,30] Units: .01
Unique values: 37 Missing .: 3/512

Mean: 5.84303
Std. dev.: 4.53497

Percentiles: 10% 25% 50% 75% 90%
2 3 5 8 10.3

---

a6 How many years have you grown (crop)?

Type: Numeric (double)

Range: [0,100] Units: .1
Unique values: 37 Missing .: 12/512

Mean: 10.3752
Std. dev.: 10.5636

Percentiles: 10% 25% 50% 75% 90%
2 4 7 12.5 20

---

a7 What will be the total area you plan to cultivate (crop) in this upcoming season

---

Type: Numeric (float)

Range: [0,15] Units: .01
Unique values: 22 Missing .: 19/512

Mean: 2.55406
Std. dev.: 1.97899

Percentiles: 10% 25% 50% 75% 90%
1 1 2 3 5

---

a8 How many acres of your (crop) will be irrigated in upcoming season?

Type: Numeric (float)

Range: [0,13] Units: .01
Unique values: 20 Missing .: 19/512

Mean: 1.94787
Std. dev.: 1.92091

Percentiles: 10% 25% 50% 75% 90%
0 1 1.5 2.5 4

---

a9 Are you a member of farmer group/organization?

Type: Numeric (byte)
Label: a9

Range: [1,2] Units: 1
Unique values: 2 Missing .: 1/512

Tabulation: Freq. Numeric Label
26 1 Yes
485 2 No
1 .

---

a10a Have you ever received any training on...(crop) farming

Type: Numeric (byte)
Label: a10a

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/512

Tabulation: Freq. Numeric Label
21 1 Yes
491 2 No

---

a10b Have you ever received any training on...(crop) seed quality

---

Type: Numeric (byte)
Label: a10b

Range: [1,2] Units: 1
Unique values: 2 Missing .: 2/512

Tabulation: Freq. Numeric Label
10 1 Yes
500 2 No
2 .

---
a11 Distance to the nearest market center in minutes (using a motorbike)?

Type: Numeric (float)

Range: [.5,95] Units: .1
Unique values: 20 Missing .: 0/512

Mean: 23.7021
Std. dev.: 13.6676

Percentiles:	10%	25%	50%	75%	90%
	10	15	20	30	30

---
a12 Distance to the nearest main road in miles?

Type: Numeric (float)

Range: [0,30] Units: .01
Unique values: 25 Missing .: 2/512

Mean: 1.98137
Std. dev.: 2.51977

Percentiles:	10%	25%	50%	75%	90%
	.5	1	1	2	5.5

---
a13 Do you sell green gram/ chickpea as seed?

Type: Numeric (int)
Label: a13

Range: [1,2] Units: 1
Unique values: 2 Missing .: 18/512

Tabulation:	Freq.	Numeric	Label
	91	1	Yes
	403	2	No
	18	.	

---

a14 What is the current price per pyi of (crop) seed (Price/Pyi)?

Type: Numeric (int)

Range: [200,5000] Units: 1
Unique values: 34 Missing .: 33/512

Mean: 2182.9
Std. dev.: 890.654

Percentiles:	10%	25%	50%	75%	90%
	1300	1500	2000	2500	3500

CODE BOOK

File name: sec b.dta

---

uid — unique ID

Type: Numeric (float)

Range: [1012,12172] Units: 1
Unique values: 511 Missing .: 0/512

Mean: 6311.38
Std. dev.: 3249.86

Percentiles:	10%	25%	50%	75%	90%
	2121	3186.5	6371.5	8316	11101

---

fid — Farmer ID

Type: Numeric (byte)

Range: [1,63] Units: 1
Unique values: 54 Missing .: 0/512

Mean: 17.5117
Std. dev.: 11.9578

Percentiles:	10%	25%	50%	75%	90%
	4	8	16	25	32

---

villageid — village ID

Type: String (str3)

Unique values: 17 Missing "": 0/512

Examples: "12G"
"3C"
"6C"
"7C"

---

cid crop ID

Type: Numeric (float)
Label: cid

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/512

Tabulation: Freq. Numeric Label
255 1 Chick Pea
257 2 Green Gram

---

b1a How many of (Smart Phones) does your HH own?

Type: Numeric (byte)

Range: [0,7] Units: 1
Unique values: 8 Missing .: 2/512

Tabulation: Freq. Value
39 0
188 1
191 2
72 3
15 4
3 5
1 6
1 7
2 .

---

b1b How many of (TV) does your HH own?

Type: Numeric (byte)

Range: [0,2] Units: 1
Unique values: 3 Missing .: 2/512

Tabulation: Freq. Value
158 0
335 1

```
          17  2
           2  .
```

---

b1c How many of (4W tractor) does your HH own?

```
        Type: Numeric (byte)

       Range: [0,1]              Units: 1
Unique values: 2                 Missing .: 3/512

    Tabulation: Freq.  Value
              503  0
                6  1
                3  .
```

---

b1d How many of (2W tractor) does your HH own?

```
        Type: Numeric (byte)

       Range: [0,3]              Units: 1
Unique values: 4                 Missing .: 3/512

    Tabulation: Freq.  Value
              390  0
              116  1
                2  2
                1  3
                3  .
```

---

b1e How many of (Solar panel) does your HH own?

```
        Type: Numeric (byte)

       Range: [0,3]              Units: 1
Unique values: 4                 Missing .: 3/512

    Tabulation: Freq.  Value
              266  0
              229  1
               13  2
                1  3
                3  .
```

---

b1f How many of (Motorcycle) does your HH own?

Type: Numeric (byte)

Range: [0,5] Units: 1
Unique values: 6 Missing .: 2/512

Tabulation: Freq. Value
35 0
314 1
133 2
22 3
4 4
2 5
2 .

---

b1g How many of (Bicycles) does your HH own?

Type: Numeric (byte)

Range: [0,4] Units: 1
Unique values: 5 Missing .: 2/512

Tabulation: Freq. Value
222 0
204 1
71 2
11 3
2 4
2 .

---

b1h How many of (cupboard or food storage cabinet) does your HH own?

Type: Numeric (byte)

Range: [0,4] Units: 1
Unique values: 5 Missing .: 2/512

Tabulation: Freq. Value
84 0
302 1
88 2
25 3

11 4
2 .

---

b2a How many (Cow/Cattle/oxen) does your HH own?

Type: Numeric (byte)

Range: [0,70] Units: 1
Unique values: 12 Missing .: 2/512

Mean: 2.17059
Std. dev.: 3.71482

Percentiles: 10% 25% 50% 75% 90%
0 0 2 3 5

---

b2b How many (Goats/Sheep) does your HH own?

Type: Numeric (byte)

Range: [0,38] Units: 1
Unique values: 3 Missing .: 2/512

Tabulation: Freq. Value
506 0
2 15
2 38
2 .

---

b2c How many (Chicken) does your HH own?

Type: Numeric (int)

Range: [0,500] Units: 1
Unique values: 15 Missing .: 2/512

Mean: 2.65294
Std. dev.: 22.8104

Percentiles: 10% 25% 50% 75% 90%
0 0 0 0 5

---

b2d How many (Pigs) does your HH own?

Type: Numeric (byte)

Range: [0,17] Units: 1
Unique values: 6 Missing .: 2/512

Tabulation: Freq. Value
469 0
24 1
13 2
1 3
1 13
2 17
2 .

---

b3 What type of stove is used most often for cooking food in the household?

Type: Numeric (byte)
Label: b3_type

Range: [1,2] Units: 1
Unique values: 2 Missing .: 3/512

Tabulation: Freq. Numeric Label
159 1 Open fire, open stove, rice-husk stove, or traditional closed stove
350 2 A1 improved stove, other improved stove, stove using electricity, gas, kerosene/diesel, or biofuel, or other
3 .

---

b4 What is the major construction material of the floor?

Type: Numeric (byte)
Label: b4_type

Range: [1,2] Units: 1

Unique values: 2 Missing .: 2/512

Tabulation: Freq. Numeric Label
175 1 Earth/sand/palm/bamboo or other
335 2 Wood planks,parquet or polished wood, tongue-and- groove wood,cement
2 .

---

b5 What is the major construction material of the external (outer) walls of your house

---

Type: Numeric (byte)
Label: b5_type

Range: [1,4] Units: 1
Unique values: 4 Missing .: 2/512

Tabulation: Freq. Numeric Label
4 1 Thatch/large leaves/palm/dhani, or tarpaulin
364 2 Bamboo, or rudimentary wood 2
17 3 Unbaked brick and mud, finished wood, or other
125 4 Baked brick and cement, or pucca cement
2 .

CODE BOOK

File name: sec c.dta

---

uid unique ID

Type: Numeric (float)

Range: [1012,12172] Units: 1
Unique values: 512 Missing .: 0/512

Mean: 6311.39
Std. dev.: 3249.86

Percentiles: 10% 25% 50% 75% 90%
2121 3186.5 6371.5 8316 11101

---

fid Farmer ID

Type: Numeric (byte)

Range: [1,63] Units: 1
Unique values: 54 Missing .: 0/512

Mean: 17.5117
Std. dev.: 11.9578

Percentiles: 10% 25% 50% 75% 90%
4 8 16 25 32

---

villageid village ID

Type: String (str3)

Unique values: 18 Missing "": 0/512

Examples: "12G"

"3C"
"6C"
"7C"

---

cid crop ID

Type: Numeric (float)
Label: cid

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/512

Tabulation: Freq. Numeric Label
254 1 Chick Pea
258 2 Green Gram

---

c1 Have you ever used or purchased certified seeds of (crop)?

Type: Numeric (byte)
Label: c1

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/512

Tabulation: Freq. Numeric Label
87 1 Yes
425 2 No

---

c2 If no, why not?

Type: Numeric (byte)
Label: c2

Range: [1,99] Units: 1
Unique values: 7 Missing .: 87/512

Tabulation: Freq. Numeric Label
28 1 Expensive/cannot afford/cash

		constraint
75	2	Don't trust the quality
144	3	Not available
5	4	Not available on time
103	5	Don't know this type of seed
3	6	Not adaptable to local conditions
67	99	other (specify)
87	.	

---

c3 Normally, what type of seed do you use for cultivation for (crop)?

Type: Numeric (byte)
Label: c3

Range: [2,3] Units: 1
Unique values: 2 Missing .: 437/512

Tabulation: Freq. Numeric Label

47	2	certified seed
28	3	both
437	.	

---

c4 On average, what percentage of (crop) seeds are certified seed?

Type: Numeric (float)

Range: [0,100] Units: .1
Unique values: 16 Missing .: 0/512

Mean: 15.5811
Std. dev.: 34.1334

Percentiles:

10%	25%	50%	75%	90%
0	0	0	0	100

---

c5 Distance to the nearest source to access crop seed by township DOA (miles)

Type: Numeric (float)

Range: [.5,999] Units: .1
Unique values: 21 Missing .: 0/512

Mean: 386.871
Std. dev.: 484.566

Percentiles: 10% 25% 50% 75% 90%
1.5 2 6 999 999

---

c6 Distance to the nearest source to access certified (crop) seed by private compan

---

Type: Numeric (float)

Range: [0,999] Units: .1
Unique values: 16 Missing .: 0/512

Mean: 765.808
Std. dev.: 421.885

Percentiles: 10% 25% 50% 75% 90%
2 999 999 999 999

---

c7 Distance to the nearest source for purchasing certified (crop) seed by local see

---

Type: Numeric (float)

Range: [0,999] Units: .1
Unique values: 13 Missing .: 1/512

Mean: 931.145
Std. dev.: 250.55

Percentiles: 10% 25% 50% 75% 90%
999 999 999 999 999

---

c8 When it comes to adopting new technology, inputs, or farming practicees, which o

---

Type: Numeric (int)
Label: c8

Range: [1,4] Units: 1
Unique values: 4 Missing .: 9/512

Tabulation: Freq.	Numeric	Label
123	1	I am one of the first ones to adopt new technologies
220	2	I usually wait until a few farmers I know have used those inputs/technologies/practicies, and then based on their experience I make the decision
97	3	I usually wait until most farmers in this village are already using those inputs/technologies/practicies, and I am 100% sure that those technologies work
63	4	I rarely change my farming practices as I am not comfortable doing new things
9	.	

---

c9 How many acres of land do you cultivate (crop) in a normal year

---

Type: Numeric (float)

Range: [.5,75] Units: .01
Unique values: 24 Missing .: 0/512

Mean: 2.71758
Std. dev.: 4.02287

Percentiles:	10%	25%	50%	75%	90%
	1	1	2	3	5

---
c10 Total quantity produced in a normal year (baskets)

Type: Numeric (double)

Range: [0,200] Units: .1
Unique values: 57 Missing .: 0/512

Mean: 26.0264
Std. dev.: 24.1684

Percentiles: 10% 25% 50% 75% 90%
10 12 20 30 50

---
c11 what percent of your (crop) harvest do you sell in a normal year (0-100)

Type: Numeric (double)

Range: [0,100] Units: .01
Unique values: 30 Missing .: 0/512

Mean: 92.2156
Std. dev.: 16.2549

Percentiles: 10% 25% 50% 75% 90%
85 90 97 100 100

---
c12 In a normal year, what percent of your crop a total production cost is devoted
t

Type: Numeric (float)

Range: [0,97] Units: .0001
Unique values: 51 Missing .: 0/512

Mean: 5.5793
Std. dev.: 11.4351

Percentiles: 10% 25% 50% 75% 90%
0 0 .1 5 20

CODE BOOK

File name: sec d.dta

---

uid unique ID

Type: Numeric (float)

Range: [1012,12172] Units: 1
Unique values: 512 Missing .: 0/531

Mean: 6407.11
Std. dev.: 3264.26

Percentiles: 10% 25% 50% 75% 90%
2131 3202 6402 9032 11122

---

fid Farmer ID

Type: Numeric (byte)

Range: [1,63] Units: 1
Unique values: 54 Missing .: 0/531

Mean: 17.5857
Std. dev.: 11.9047

Percentiles: 10% 25% 50% 75% 90%
4 8 16 25 33

---

cid crop ID

Type: Numeric (float)
Label: cid

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/531

Tabulation: Freq. Numeric Label
268 1 Chick Pea
263 2 Green Gram

---

villageid village ID

Type: String (str3)

Unique values: 18 Missing "": 0/531

Examples: "12G"
"3C"
"6C"
"7C"

---

variety_id variety ID

Type: Numeric (float)

Range: [1,4] Units: 1
Unique values: 4 Missing .: 1/531

Tabulation: Freq. Value
512 1
14 2
2 3
2 4
1 .

---

d1 In the last season, how many (crop)varieties did you plant?

Type: Numeric (byte)

Range: [1,4] Units: 1
Unique values: 3 Missing .: 18/531

Tabulation: Freq. Value

503 1
8 2
2 4
18 .

---

d2 variety ID

Type: String (str2)

Unique values: 5 Missing "": 1/531

Tabulation: Freq. Value
1 ""
510 "V1"
14 "V2"
2 "V3"
2 "V4"
2 "VI"

---

d3 Name of the (crop) variety planted in last season

Type: String (str18)

Unique values: 39 Missing "": 5/531

Examples: "B2"
"B2"
"Kauk Sein"
"Kauk sein"

Warning: Variable has embedded and trailing blanks.

---

d4 What was the source of the seed you planted last season?

Type: Numeric (float)
Label: d4

Range: [1,99] Units: 1

Unique values: 8 Missing .: 6/531

Tabulation: Freq. Numeric Label
173 1 own harvest
112 2 neighbor/other farmer
191 3 market/trader
19 4 agrodealer
20 5 DOA
4 6 private company
3 7 seed producer
3 99 other (specify)
6 .

---

d5 What type of seed it was?

Type: Numeric (byte)
Label: d5

Range: [1,2] Units: 1
Unique values: 2 Missing .: 4/531

Tabulation: Freq. Numeric Label
454 1 grain
73 2 certified
4 .

---

d6 In your opinion is this variety an improved or traditional variety

---

Type: Numeric (byte)

Range: [1,2] Units: 1
Unique values: 2 Missing .: 11/531

Tabulation: Freq. Value
457 1
63 2
11 .

---
d7 Quantity of seed per acre of this variety was planted last season (pyi)

Type: Numeric (float)

Range: [1,80] Units: .1
Unique values: 31 Missing .: 6/531

Mean: 10.2926
Std. dev.: 8.23399

Percentiles: 10% 25% 50% 75% 90%
3 4 7 16 24

---
d8 How satisfied were you with the quality of seed you used last season?

Type: Numeric (byte)
Label: d8

Range: [1,3] Units: 1
Unique values: 3 Missing .: 6/531

Tabulation: Freq. Numeric Label
48 1 very dissatisfied
109 2 neutral
368 3 very satisfied
6 .

---
d9 Year your first planted this variety on your farm (YYYY)

Type: Numeric (int)

Range: [1012,2019] Units: 1
Unique values: 32 Missing .: 5/531

Mean: 2005.81
Std. dev.: 75.474

Percentiles: 10% 25% 50% 75% 90%
2007 2010 2013 2015 2016

CODE BOOK

File name: sec e.dta

---

uid unique ID

Type: Numeric (float)

Range: [1012,12172] Units: 1
Unique values: 512 Missing .: 0/512

Mean: 6311.39
Std. dev.: 3249.86

Percentiles: 10% 25% 50% 75% 90%
2121 3186.5 6371.5 8316 11101

---

fid Farmer ID

Type: Numeric (byte)

Range: [1,63] Units: 1
Unique values: 54 Missing .: 0/512

Mean: 17.5117
Std. dev.: 11.9578

Percentiles: 10% 25% 50% 75% 90%
4 8 16 25 32

---

cid crop ID

Type: Numeric (float)
Label: cid

Range: [1,2] Units: 1

Unique values: 2 Missing .: 0/512

Tabulation: Freq. Numeric Label
254 1 Chick Pea
258 2 Green Gram

---

villageid village ID

Type: String (str3)

Unique values: 16 Missing "": 0/512

Examples: "12G"
"3C"
"6C"
"7C"

---

e1a similar seed size

Type: Numeric (byte)
Label: e1a

Range: [1,4] Units: 1
Unique values: 4 Missing .: 2/512

Tabulation: Freq. Numeric Label
281 1 very important
184 2 somewhat important
29 3 neutral
16 4 not important
2 .

---

e1b seed free from disease and pests

Type: Numeric (byte)
Label: e1a

Range: [1,5] Units: 1

Unique values: 5 Missing .: 2/512

Tabulation: Freq. Numeric Label
349 1 very important
140 2 somewhat important
6 3 neutral
14 4 not important
1 5 not at all important
2 .

---

e1d packaging (bag type or size)

Type: Numeric (byte)
Label: e1a

Range: [1,4] Units: 1
Unique values: 4 Missing .: 3/512

Tabulation: Freq. Numeric Label
203 1 very important
179 2 somewhat important
89 3 neutral
38 4 not important
3 .

---

e1e seed free from dirt, stones, foreign material

Type: Numeric (byte)
Label: e1a

Range: [1,5] Units: 1
Unique values: 5 Missing .: 3/512

Tabulation: Freq. Numeric Label
241 1 very important
44 2 somewhat important
58 3 neutral
162 4 not important
4 5 not at all important
3 .

---
e1f certified-inspected by government

Type: Numeric (byte)
Label: e1a

Range: [1,4] Units: 1
Unique values: 4 Missing .: 5/512

Tabulation: Freq. Numeric Label
358 1 very important
56 2 somewhat important
7 3 neutral
86 4 not important
5 .
---
e1g purity

Type: Numeric (byte)
Label: e1a
Range: [1,5] Units: 1
Unique values: 5 Missing .: 3/512

Tabulation: Freq. Numeric Label
262 1 very important
101 2 somewhat important
39 3 neutral
105 4 not important
2 5 not at all important
3 .
---
e1h germination rate

Type: Numeric (byte)
Label: e1a
Range: [1,5] Units: 1
Unique values: 4 Missing .: 2/512

Tabulation: Freq. Numeric Label
399 1 very important
26 2 somewhat important
84 4 not important
1 5 not at all important
2 .

CODE BOOK

File name: sec f.dta

---

uid unique ID

Type: Numeric (float)

Range: [1012,12172] Units: 1
Unique values: 512 Missing .: 0/2,560

Mean: 6311.39
Std. dev.: 3247.32

Percentiles: 10% 25% 50% 75% 90%
2121 3186.5 6371.5 8316 11101

---

fid Farmer ID

Type: Numeric (byte)

Range: [1,63] Units: 1
Unique values: 54 Missing .: 0/2,560

Mean: 17.5117
Std. dev.: 11.9485

Percentiles: 10% 25% 50% 75% 90%
4 8 16 25 32

---

cid crop ID

Type: Numeric (float)
Label: cid

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/2,560

Tabulation: Freq. Numeric Label
1,270 1 Chick Pea
1,290 2 Green Gram

---

villageid village ID

Type: String (str3)

Unique values: 18 Missing "": 0/2,560

Examples: "1G"
"3C"
"6C"
"7C"

---

f1 seed type

Type: Numeric (float)
Label: f1

Range: [1,5] Units: 1
Unique values: 5 Missing .: 0/2,560

Tabulation: Freq. Numeric Label
512 1 grain from farmer
512 2 grain from market
512 3 certified seed from DOA
512 4 certified seed from local seed producer
512 5 certified seed from company

---

f2 Based on your bids for the last round of auctions, how many pyi of (crop) seed o

---

Type: Numeric (float)

Range: [0,168] Units: .1
Unique values: 39 Missing .: 1/2,560

Mean: 5.8914

Std. dev.: 12.8194

Percentiles: 10% 25% 50% 75% 90%
0 0 0 6 16

---

f3 from all the seeds you saw today, which seed did you like the most?

Type: Numeric (byte)
Label: f3

Range: [0,1] Units: 1
Unique values: 2 Missing .: 330/2,560

Tabulation: Freq. Numeric Label
1,733 0 not liked most
497 1 like most
330 .

---

f4 what is the main reason for not bidding higher than what you bid today

---

Type: Numeric (byte)
Label: f4

Range: [1,99] Units: 1
Unique values: 4 Missing .: 2,069/2,560

Tabulation: Freq. Numeric Label
397 1 comparing with market price
34 2 no money/cannot afford
7 3 bidding what I heard other farmers bidding
53 99 other
2,069 .

CODE BOOK

File name: sec p.dta

---

uid unique ID

Type: Numeric (float)

Range: [1012,12172] Units: 1
Unique values: 512 Missing .: 0/3,072

Mean: 6311.39
Std. dev.: 3247.21

Percentiles: 10% 25% 50% 75% 90%
2121 3186.5 6371.5 8316 11101

---

fid farmer id

Type: Numeric (byte)

Range: [1,63] Units: 1
Unique values: 54 Missing .: 0/3,072

Mean: 17.5117
Std. dev.: 11.9481

Percentiles: 10% 25% 50% 75% 90%
4 8 16 25 32

---

villageid village ID

Type: String (str3)

Unique values: 18 Missing "": 0/3,072
Examples: "1G"
"3C"
"6C"
"7C"

---

cid crop ID

Type: Numeric (float)
Label: cid

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/3,072

Tabulation: Freq. Numeric Label
1,524 1 Chick Pea
1,548 2 Green Gram

---

p1 Source

Type: Numeric (float)
Label: p1

Range: [1,6] Units: 1
Unique values: 6 Missing .: 0/3,072

Tabulation: Freq. Numeric Label
512 1 own saved seed
512 2 grain from other farmer
512 3 grain from market
512 4 DOA
512 5 local seed producer
512 6 private companies

---

p2 Have you ever used green gram/chickpea seed from (source) before?

Type: Numeric (byte)
Label: p2

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/3,072

Tabulation: Freq. Numeric Label
1,074 1 Yes
1,998 2 No

---

p3 How would you rank the quality from each of the following sources?

Type: Numeric (byte)

Range: [1,96] Units: 1
Unique values: 7 Missing .: 5/3,072

Tabulation: Freq. Value
499 1
358 2
183 3
27 4
7 5
2 6
1,991 96
5 .

CODE BOOK

File name: sec z.dta

---

uid unique ID

Type: Numeric (float)

Range: [1012,12172] Units: 1
Unique values: 512 Missing .: 0/512

Mean: 6311.39
Std. dev.: 3249.86

Percentiles: 10% 25% 50% 75% 90%
2121 3186.5 6371.5 8316 11101

---

fid farmer id

Type: Numeric (byte)

Range: [1,63] Units: 1
Unique values: 54 Missing .: 0/512

Mean: 17.5117
Std. dev.: 11.9578

Percentiles: 10% 25% 50% 75% 90%
4 8 16 25 32

---

villageid village ID

Type: String (str3)

Unique values: 18 Missing "": 0/512

Examples: "12G"
"3C"

"6C"
"7C"

---

cid crop ID

Type: Numeric (float)
Label: cid

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/512

Tabulation: Freq. Numeric Label
254 1 Chick Pea
258 2 Green Gram

---

z2 Are you the main or (one of the main) decision maker for (crop) cultivation and

---

Type: Numeric (byte)

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/512

Tabulation: Freq. Value
505 1
7 2

---

z4 Gender

Type: Numeric (byte)
Label: z4

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/512

Tabulation: Freq. Numeric Label
271 1 Male
241 2 Female

---
z5 Age

Type: Numeric (byte)

Range: [17,81] Units: 1
Unique values: 55 Missing .: 9/512

Mean: 48.5149
Std. dev.: 11.6078

Percentiles:	10%	25%	50%	75%	90%
	32	40	49	57	63

CODE BOOK

File name: round1_bids.dta

---

uid unique ID

Type: Numeric (float)

Range: [1012,12172] Units: 1
Unique values: 513 Missing .: 0/2,565

Mean: 6303.39
Std. dev.: 3249.19

Percentiles: 10% 25% 50% 75% 90%
2121 3182 6371 8311 11101

---

fid Farmer ID

Type: Numeric (byte)

Range: [1,63] Units: 1
Unique values: 54 Missing .: 0/2,565

Mean: 17.5185
Std. dev.: 11.9378

Percentiles: 10% 25% 50% 75% 90%
4 8 16 25 32

---

cid crop ID

Type: Numeric (float)
Label: cid

Range: [1,2] Units: 1

Unique values: 2 Missing .: 0/2,565

Tabulation: Freq. Numeric Label
1,275 1 Chick Pea
1,290 2 Green Gram

---

villageid village ID

Type: String (str3)

Unique values: 18 Missing "": 0/2,565

Examples: "1G"
"3C"
"6C"
"7C"

---

township survey township

Type: String (str9)

Unique values: 2 Missing "": 0/2,565

Tabulation: Freq. Value
1,940 "Kyauk Se"
625 "Myit Thar"

Warning: Variable has embedded blanks.

---

set questionnaire set

Type: String (str1)

Unique values: 4 Missing "": 0/2,565

Tabulation: Freq. Value
545 "A"
940 "B"

```
            600  "C"
            480  "D"

-------------------------------------------------------------------------------------------------------------
round                                                                    Round
-------------------------------------------------------------------------------------------------------------

         Type: Numeric (byte)

        Range: [1,1]                Units: 1
    Unique values: 1                Missing .: 0/2,565

      Tabulation: Freq.  Value
            2,565  1

-------------------------------------------------------------------------------------------------------------
item_row_num                                                             seed item number
-------------------------------------------------------------------------------------------------------------

         Type: Numeric (byte)

        Range: [1,5]                Units: 1
    Unique values: 5                Missing .: 0/2,565

      Tabulation: Freq.  Value
            513  1
            513  2
            513  3
            513  4
            513  5

-------------------------------------------------------------------------------------------------------------
item                                                                     seed item
-------------------------------------------------------------------------------------------------------------

         Type: Numeric (float)
        Label: item

        Range: [1,5]                Units: 1
    Unique values: 5                Missing .: 0/2,565

      Tabulation: Freq.   Numeric  Label
            513       1  Mkt Grain
            513       2  Govt
```

```
        513        3  Company
        513        4  Local Seed
        513        5  Farmer Grain
```

WTP WTP/pyi

```
      Type: Numeric (int)

     Range: [0,10000]          Units: 1
Unique values: 74              Missing .: 0/2,565

      Mean: 2648.12
 Std. dev.: 1534.77

Percentiles:    10%     25%     50%     75%     90%
                1000    1500    2500    3000    5000
```

---

quality_score quality rating score

```
      Type: Numeric (byte)
     Label: quality_score

     Range: [1,5]              Units: 1
Unique values: 5               Missing .: 4/2,565

Tabulation: Freq.   Numeric  Label
        707        1  Best
        663        2  Good
        742        3  Fair
        346        4  Bad
        103        5  Very Bad
          4        .
```

CODE BOOK

File name: round2_bids.dta

---

uid unique ID

Type: Numeric (float)

Range: [1012,12172] Units: 1
Unique values: 513 Missing .: 0/4,104

Mean: 6303.39
Std. dev.: 3248.95

Percentiles: 10% 25% 50% 75% 90%
2121 3182 6371 8311 11101

---

fid Farmer ID

Type: Numeric (byte)

Range: [1,63] Units: 1
Unique values: 54 Missing .: 0/4,104

Mean: 17.5185
Std. dev.: 11.937

Percentiles: 10% 25% 50% 75% 90%
4 8 16 25 32

---

cid crop ID

Type: Numeric (float)
Label: cid

Range: [1,2] Units: 1
Unique values: 2 Missing .: 0/4,104

Tabulation: Freq. Numeric Label
2,040 1 Chick Pea
2,064 2 Green Gram

---

villageid village ID

Type: String (str3)

Unique values: 18 Missing "": 0/4,104

Examples: "1G"
"3C"
"6C"
"7C"

---

township survey township

Type: String (str9)

Unique values: 2 Missing "": 0/4,104

Tabulation: Freq. Value
2,760 "Kyauk Se"
1,344 "Myit Thar"

Warning: Variable has embedded blanks.

---

set questionnaire set

Type: String (str1)

Unique values: 4 Missing "": 0/4,104

Tabulation: Freq. Value
872 "A"
1,504 "B"
960 "C"

768 "D"

---

round Round

Type: Numeric (byte)

Range: [2,2] Units: 1
Unique values: 1 Missing .: 0/4,104

Tabulation: Freq. Value
4,104 2

---

item_row_num seed item number

Type: Numeric (byte)

Range: [1,8] Units: 1
Unique values: 8 Missing .: 0/4,104

Tabulation: Freq. Value
513 1
513 2
513 3
513 4
513 5
513 6
513 7
513 8

---

item seed item

Type: Numeric (float)
Label: item

Range: [1,8] Units: 1
Unique values: 8 Missing .: 0/4,104

Tabulation: Freq. Numeric Label

513	1	company wo lab
513	2	farmer grain
513	3	company w lab
513	4	govt wo lab
513	5	local w lab
513	6	local wo lab
513	7	govt w lab
513	8	mkt grain

WTP WTP/pyi

Type: Numeric (long)

Range: [0,60000] Units: 1
Unique values: 84 Missing .: 15/4,104

Mean: 2843.72
Std. dev.: 1962.23

Percentiles: 10% 25% 50% 75% 90%
1200 1800 2500 3500 5000

---

quality_score quality rating score

Type: Numeric (byte)
Label: quality_score

Range: [1,5] Units: 1
Unique values: 5 Missing .: 34/4,104

Tabulation: Freq. Numeric Label

929	1	Best
1,338	2	Good
1,339	3	Fair
386	4	Bad
78	5	Very Bad
34	.	