Bangladesh Water Development Board (BWDB)

Embassy of the Kingdom of the Netherlands (EKN) Dhaka, Bangladesh

Department of Agricultural Extension (DAE)

Technical Note 25

Cycle 14 FFS

Technical Note25

Cycle 14 FFS

Khulna, Patuakhali, Satkhira

July 2020 to November 2020

Comparing benchmark and end data

December 2020

Blue Gold Program

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Executive summary

A total of 30 Farmer Field Schools (FFSs) implemented in Khulna (P-25, 27/1, 28/1, 34/2-part), Sathkira(P-2) and Patuakhali (P-43/2B, 43/2D, 47/3, 47/4, 55/2C)with poultry module for skill-upgradation of poor polder dwellers. In 14th cycle FFS, 99% young women participated with poultry module. Inclusiveness of poorest were 63%. Among the FFS members 52% had their primary education.

Adoption of improved technologies for native poultry production

Consolidated data from benchmark and end line survey demonstrated that at the end of FFS almost all farmer adopted their FFS learning.

Diseases are the number one problem limiting small-scale poultry production of FFS members. FFS farmers were given knowledge on preventive measures under the topic of bio-security and access to vaccination through poultry workers. The result showed that before FFS 0.37 % farmer always vaccinated their birds but at the end of FFS farmer showed positive changes in their vaccination practices and the vaccination percentage increased to 59.66%. The use of *hazal (*an earthen device) introduced with poultry rarer for better broody hen management. The data showed the adoption percentage was 98.62 % at the end of the FFS, compare to 3.68 % before.

Early chick separation from a mother hen has a good impact on increasing production cycle of a poultry bird. In relation to this practice the survey shows that before the FFS, 96.32% farmer never separated chick from mother hen. After the FFS intervention,82.07% farmer separated mother hen from chicks after one week and 17.59% separated after two weeks respectively. Checking of eggs fertility after 5 days of hatching by candle light was 3.31% at the beginning increased to 100 % at the end of FFS. Improved technologies adaptation had a good impact on poultry production and the production almost doubled compare to benchmark. Data shows that the number of egg production/hen/year increased from 40 to 94 and egg/duck/year increased from 51 to 133 respectively. At the end of FFS, number of selling eggs per months increased from 9.30 to 37.20 and the annual poultry sales increased from 8.56 to 26.81.

Adoption of market orientation issues

The survey showed that at the end of FFS 100% of farmers considered poultry rearing as a business. Few percentages of farmers were involved with using ICT before FFS. At the end of FFS for information collection on input management and technical knowledge by using mobile phone has increased. It is found from the survey result that 54.48% members now started using ICT when necessary. At the end of FFS 98.97% FFS member collect input collectively which was <1% at the beginning. The collective selling percentage rose to 61.54% at the end of FFS. Farmer also linked with resource farmers for input purchase, product selling and technical information.

Gender issues in FFS

It is noted that after attending FFS, women linked with local market and started to communicate with market actors by using mobile phone. Survey reveals that 63.10% women had the market actor phone number and among them 64.48% started to communicate with market actors by the end of FFS. As almost all FFS members considered poultry rearing is a business, women involved their spouse in homestead production system for more benefit. At the end of FFS choice shifted to 61% and 70.69% jointly for input management, eating and selling of extra production respectively.

1. Introduction

The land, water, and ecosystems of coastal areas are severely affected by the climate variability and the dwellers are not new to disasters. But the COVID-19 pandemic is a new crisis with different scale and magnitude and affecting the food and agriculture sector. As the pandemic unfolds in Bangladesh, Blue Gold Program (BGP) immediately response to cope this situation in its working areas. BGP has revised the health and safety measure guideline for implementing its planned activities for the year of 2020-2021. By following COVID-19 protocol and adopted health and safety guide line a total of 30 Farmer Field Schools (FFSs) has implemented in Khulna (Polders 25, 27/1, 27/2, 34-2 part) Satkhira (P-2) and Patuakhali (polders 43/2B, 43/2D, 47/3, 47/4, 55/2C). FFSs ran with native poultry rearing modules with market orientation as resilient livelihoods.

BGP has focused on enabling smallholder farmer to increase agricultural production and productivity as means of food security. Through FFS BGP has established demonstration on improved management practices of housing, feeding, disease control, broody hen management of local poultry rearing. Skill up-gradation of rural farmers on better husbandry practices may help increase of better production.

This is a report of data collected in cycle 14, which took place from July 2020 to November 2020 in Khulna, Patuakhali and Sathkira. Farmer Trainers involved as Facilitators under Community Development Facilitator (CDFs) supervision to run cycle 14 FFS.

1.1 Methodologies

FFS Member Selection

During FFS member selection, special emphasis given to select poor farmer and the members are selected by following a set of criteria. The criteria for selecting poorest farmer are;

1. Does any of your HH members work as agriculture labour?
2. How much agricultural land does your household own?
3. What is the status of your household structure? (Code: 1=Jhupri; 2=Kutcha; 3= Semi Pucca; 4=Pucca)

Type of house	Construction
Pucca	Solid, permanent construction with bricks and concrete, possibly corrugated iron roofing.
Semi-Pucca	Concrete floors, walls partially of bricks (e.g., brick foundation), partially of bamboo or iron sheets, corrugated iron roofing.
Kutcha	Earthen floor, walls of mud bricks or woven materials (jute, bamboo), roof of thatch or occasionally corrugated iron.
Jhupri	Earthen floor, walls of mud bricks or jute sacks, roof of thatch or corrugated iron.

The prospective poorest households in rural areas would therefore be agricultural labourers residing in jhupri or single structure thatch owning up to 0.5 acres of land.

Data collection and analysis

Data on 30 FFS members collected by Farmer Trainer (FTs).Open Data Kit (OK) tools used for data collection by using mobile phone. A semi-structure questionnaire was used to collect data through interviews on technology adaptation, surplus production, and utilization of surplus production, market orientation, and dietary changes of FFS members before and after FFS. The sample size was 273 for benchmark and 290for end line survey for poultry module respectively. Random sampling technic was used for information collection.

Totals and averages of the collected benchmark and end data are calculated by entering into excel sheet from html version. The calculated averages of collected data at the beginning and end ofthe FFS show an impact of homestead production of poor farmer on their food security.

Bringing the sample data of 30FFS together, creates a dataset with information of over 750 farmers.

In the below discussion of the data, comments are included to help with the interpretation of the results.

1.2 Objectives

At the start of the FFS, the objectives of the “benchmark survey” are:

- To establish benchmarks that can be used by farmers and facilitators for measuring progress (e.g. in production) or to identify changes in behaviour
- To generate interest among participants and introduce them to the topics which will be discussed and practiced during the FFS.

At the end of the FFS, the “end survey” is a repetition of the same questions. This allows the FFS participants to verify their own progress, and they can present their results (e.g. better husbandry adaptation an increase of egg production etc), during farmer field days.

2. Poultry Module with market orientation

A total of 30 Farmer Field School (FFS) implemented at Khulna , Patuakhali and Sathkita with Poutry module . The below table shows polder wise implemented FFS status .

Table 1: Polder wise Implemented Poultry FFS

Duration: July-November 2020						
Zone	**Polder**	**Module**	**No. of FFS**	**M**	**F**	**Total**
Khulna	P-25	Poultry	4	0	100	100
	P-27/1	Poultry	2	0	50	50
	P-28/1	Poultry	2	0	50	50
	P-34/2	Poultry	4	0	100	100
	Sub-total		12	0	300	300
Patuahali	P-43/2B	Poultry	2	1	49	50
	P-43/2D	Poultry	3	0	75	75
	P-47/3	Poultry	2	0	50	50
	P-47/4	Poultry	4	0	100	100
	P-55/2C	Poultry	4	2	98	100
	Sub-total		15	3	372	375
Sathkira	P-2	Poultry	3	0	75	75
	Sub-total		3	0	75	75
Total			**30**	**3**	**747**	**750**

2.1 General information of FFS participants with poultry module

The table below shows that 99% women participated with poultry module as village women can manage and benefit directly from household poultry. Young, energetic and dynamic farmers were selected purposively, and the average age of the participants was 35 years. Almost all participants are registered WMG members. The majority of farmers are literate and the percentages belong to primary 52% and secondary 29% respectively. Inclusions of the poorest people were 63%.

Table 2: General information of FFS members

Sl no.	Particulars	Result
1	Average age	35
2	Gender	99
3	WMG member	99
4	Education	52%(primary), 29% (secondary)
5	Inclusion Poorest people	63

2.2 Result on Poultry Module

FFS cycle 14 included the poultry module with market orientation. Objective of this module is to increase the production of birds and eggs and reduce losses due to diseases through skill-up gradation of rural women. Here FFS approach use as a dissemination tool.

Technical topics in the poultry module include housing, feeding, use of *hazal*, separating chicks from the mother hen, candling, and vaccination. For market orientation, topics include networking, collective action and linkages with input providers, community poultry workers and department of livestock.

2.2.1 Numbers of birds and egg production

The following tables show the average number of chicken, chicks, ducks and ducklings per household. The end survey shows big increases in the number of birds. This can be partly attributed to improved rearing methods.

Table 3: Comparison between benchmark and end line regarding number of poultry per household and egg production per bird

Particulars	Patuakhali, Khulna, Sathkira (average)	
	Benchmark (273)	**End line (290)**
Average number of chicken /household	4.41	9.58
Average number of chicks /household	4.99	15.84
Average number of ducks /household	4.94	8.56
Average number of duckling/household	2.10	5.07

In the FFS the participants learn techniques to increase egg production (e.g. separating chicks from hen after 1 week). There was a demonstration with each of the FFS with improved and traditional technique of broody hen management. At the end it had a good impact on increase of egg production cycles of a hen.

The following figure-1 shows how the farmers estimated the egg production per year for their chickens and ducks. These numbers are of course rough estimates and it seems that in the end the estimates number has increased almost double.

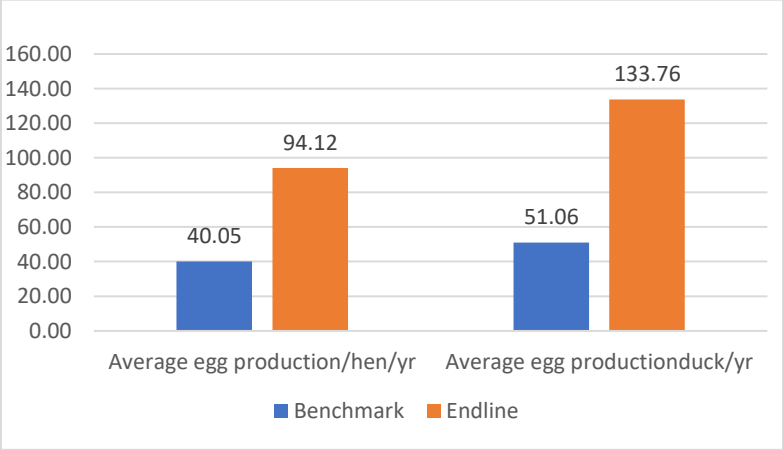

Figure 1: *Egg production /bird/year*

Utilization of eggs and birds

The following table also shows that in the end of FFS, egg and poultry selling has increased. We see that the number of egg selling increased more than three times comapre to benchmark survey. Yearly poultry selling also increased significantly. Concurrently with the increase in birds and egg production, households consume more of their own eggs and birds. Short reproductive cycles ensure quick returns to the rarer. Poultry provides high value protein for poor farmers (eggs and meat) with no or very less investment in free range system .

Table 4: Comparison between benchmark and end line regarding the sale and consumption of eggs and poultry per HH in Khulna, Patuakhali and Sathkira

Particulars	Patuakhali, Khulna, Sathkira(average per household)	
	Benchmark (273)	**End line (290)**
Consume own eggs/week	5.41	10.30
Consume own birds/monthly	1.14	2.38
Selling eggs/month	9.30	37.20
Selling poultry /year	8.56	26.81

2.2.2 Poultry rearing practices

In the poultry module, the FFS farmers learn about good husbundry practices which includes disease management (vaccination of the birds), broody hen management, mother and chicks mangement (use of *hazals*, candling of eggs and others) etc. Many farmers at the end of the FFS report that they have adopted these practices. By following FFS principle trial on good housing, use of *hazal* (earthen device) for broody hen management, candling and chick separation techniques established with every FFS.

Diseases are the number one problem limiting small scale poultry production of FFS members. Farmer got knowledge on preventive measures under the topic bio-security and access to vaccination by poultry worker resulted the positive involvement of FFS member in vaccination. Facilitators of the FFS invited poultry workers to the FFS sessions and field days in order to link them with the FFS participants. The result showed (Table-below) that before FFS 91.54 % farmer never vaccinated their birds, 8.09% sometimes and .37 % farmer involved with always vaccination. At the end of FFS farmer showed positive changes in their vaccination practices. The regular vaccination percentage rose to 59.66% followed by 39.31% % sometimes and 1.03% never respectively. Regular vaccination for poultry is a big challenge in all over Bangladesh. Vaccination does not perform well if all the birds in the community vaccinate in proper time and dozes. Sometimes farmer get disappointed, develop mistrust on vaccination when they find no result from it. Through FFS farmer were motivated to the vaccinations benefits of poultry and made a positive changes among the participants.

Proper broody hen management help increase the production cycles almost double in a year. In FFS farmers were oriented with the use of *hazal* with proper food management of a mother hen along with candling of eggs and chick separation techniques. The below table shows that at the end of FFS 98.62% farmers started using *hazals*, and all farmers adopted the practicing of

candling their eggs. Most farmers separate chicks from hen after one or two weeks, while this was not a common practice before the FFS.

Table 5: Comparison between benchmark and end line regarding improved poultry rearing practices in Khulna, Patuakhali and Sathkira

Poultry rearing practices	Patuakhali, Khulna, Sathkira(% farmer)	
	Benchmark (273)	**End line (290)**
Vaccinate always	0.37	59.66
Vaccinate sometimes	8.09	39.31
Vaccinate never	91.54	1.03
Use *hazal*	3.68	98.62
Use candling	3.31	100
Separate chicks after 1 week	1.47	82.07
Separate chicks after 2 weeks	0.74	17.59
Separate chicks never	96.32	0.0

2.3 Trends in market orientation with Poultry Module

Market orientation issues were incorporated within FFS sessions to enable farmers produce quality product and increase their income from selling. Training inspired them to keep linking with markets; as a result a considerable percentage of participants reported that they have communicated with market actors and used ICT for agricultural information collection after the training. In addition, in the training session, farmers got motivated hearing the benefits of collective action. It is noted that after attending FFS, women participants started to communicate with market actors.

From each of the FFS, one advance farmer trained as a Resource Farmer (RF) on market orientation issues. They all are attended an exposure visit to local market. Result showed that Resource Farmers started providing support to FFS member.

The following table shows the positive changes among the members on marketing issues in practice.

2.3.1 Stimulation on agriculture is a business and record keeping

After attending FFS farmer have an idea why it would be a business activity. In FFS they have an idea why it would be a business activity. The following table shows that 100% considered poultry rearing as a business. They are not used to keep record on their income and expenditure for poultry rearing. But at the end of FFS all members showed their positive response.

Table 6: Farmers understanding on agriculture is a business

Particulars	Khulna, Patuakhali, Sathkira(%)	
	Benchmark (273)	End line (290)
Poultry rearing is a business	10	100
Record keeping	0.73	99.66

2.3.2 Use of ICT for agricultural information collection

Few percentages of farmers were involved with using ICT before FFS. At the end of FFS for information collection on input management and technical knowledge by using mobile phone has increased. It is found from the below table that 54.54% members now started using ICT when necessary.

Table 7: ICT use status of FFS member

Particulars	Patuakhali, Khulna, Sathkira(% farmer)	
	Benchmark (273)	End line (290)
Never	95.78	27.24
Sometimes	3.80	54.48
always	0	0

2.3.3 Collective action

The below tables shows at the end of FFS 98.97% FFS member collect input collectively which was <1% at the beginning. The collective selling percentage rose to 61.54% at the end of FFS. Farmer also linked with resource farmers for input purchase, product selling and technical information.

Table 8: Input collection

Collectively input collection	Patuakhali, Khulna, Sathkira(% farmer)	
	Benchmark (273)	End line (290)
Yes	0.41	98.97
No	99.59	1.03

Table 9: Collective sales

Collective cell	Patuakhali, Khulna, Sathkira(% farmer)	
	Benchmark (273)	End line (290)
Never	99.27	7.69
Sometimes	0.73	61.54
always	0	30.77

2.3.4 Resource farmer support

Table 10: Resource Farmer support status

Resource farmer support	Patuakhali, Khulna, Sathkira(% farmer)	
	Benchmark (273)	**End line (290)**
Input purchase, selling	NA	81.03
Technical information	NA	18.97

2.4 Gender perspective with poultry module

Backyard poultry farming is a very familiar activity among rural women in Bangladesh. Women who are enrolled with FFS are predominant owners of poultry at homestead. During FFS, emphasis given to make poultry rearing as an agri-business and it's allowed to make some decision like input purchase, market linkages, ICT use, utilization of produce etc. The table shows that the decision making process shifted from individual to joint effort. It may happen as the participants start giving priority to poultry rearing as an agri-business. So from input and output management got importance among the family. Women started keeping and using mobile phone for communicating with market actors.

It showed at end line data that 63.10% women started keeping mobile number of different market actors, and service providers, among them 64.48% started communication when needed. Decision making process on input management and utilization of surplus product shifted from individual to joint approach. The result show that for input management64.10% FFS members took decision by their own but the end of FFS decision making process shifted to joint approach (61.03%.). 70.69% FFS member took decision jointly on surplus product utilization compare to 64.10 % of individual decision at the beginning.

2.4.1 Women linkages with market actor

Table 11: Women market linkages status

Particulars	Patuakhali, Khulna, Sathkira(% farmer)	
	Benchmark (273)	End line (290)
Women Have market actor phone number	2.53	63.10
Use frequency		
Sometimes	5.88	64.48

2.4.2 Women involvement on input management

Table 12: Input management status by women

Particulars	Patuakhali, Khulna, Sathkira (% farmer)	
	Benchmark (273)	**End line (290)**
Myself	64.10	21.03
jointly	12.09	61.03
Spouse or other family	6.23	17.59
Not applicable	17.58	0.34

2.4.3 Decision making for selling /eating poultry

Table 13: Decision making status of women

Particulars	Patuakhali, Khulna, Sathkira(% farmer)	
	Benchmark (273)	**End line (290)**
Myself	54.07	17.93
My spouse	14.66	11.38
Jointly	15.66	70.69

3. Conclusion

The data presented in this report were collected in the benchmark and end surveys of cycle 14 and represent the results of about 750 farmers.

Comparing end data with benchmark data shows some immediate effects of the FFS training, such as a considerable increase of eggs, poultry, fish and meat production. This has resulted in higher consumption and in selling of surplus produce to generate some extra income. Market orientation issues enhanced their income and access to market.

It was found from the survey that practicing improved native poultry rearing technologies playing a major role for the poor WMGs member with respect to their subsidiary income. Women are traditionally playing an important role in this sector. But they have limited access to knowledge, training and extension services. FFS the learning by doing approach has made a vital role to enrich their knowledge and process of practices.

Information supplied on market actors and line department experts help increase networking and linkages among farmers and market actors. Through FFS women have showed their positive involvement in homestead based economic activities.

From above result we can conclude that the FFSs in cycle 14 have successfully increased production and income of the participants during the FFS season.

Appendix A

Appendix-1- Poultry Module Result

FFS modules: Poultry module with market orientation (Cycle 14)

Benchmark data **Endline data of 290 FFS**

Records of 273 **FFS member (sorted feasible data)**

Polder wise Implemented Poultry FFS						
Zone	**Polder**	**Module**	**No. of FFS**	**M**	**F**	**Total**
Khulna	P-25	Poultry	4	0	100	100
	P-27/1	Poultry	2	0	50	50
	P-28/1	Poultry	2	0	50	50
	P-34/2	Poultry	4	0	100	100
	Sub-total		12	0	300	300
Patuahali	P-43/2B	Poultry	2	1	49	50
	P-43/2D	Poultry	3	0	75	75
	P-47/3	Poultry	2	0	50	50
	P-47/4	Poultry	4	0	100	100
	P-55/2C	Poultry	4	2	98	100
	Sub-total		15	3	372	375
Sathkira	P-2	Poultry	3	0	75	75
	Sub-total		3	0	75	75
	Total		**30**	**3**	**747**	**750**

General Info

Age

Average age	34.67
Median age	35
Youngest	18
Oldest	55

Gender

Men	2
Women	271
Total	273
Percentage women	99.27

Education

Illiterate	4 (1.47%)
Can sign	33 (12.09%)
Primary	141(51.65%)
Secondary	80 (29.30%)
HCC and above	15 (5.49%)
Total	273

WMG member

Member	269
Not member	4
Total	273
%	98.53

Area agriculture (decimal)

Average	35.05
Median	25
Zero area (0 decimal)	72
Landless (<50 decimal)	305
Not landless (>=50 decimal)	112
Total Farmer	417
Percentage zero area	17.27
Percentage landless	73.14
Percentage not landless	26.86
Min area (decimal)	0
Total area	5446
Households with land (>0 ha)	114
Average area for HH with land	47.77

Homestead area (decimal)

Average	10.33
Median	7
Min	0
Max	50
Zero area (num farmers)	1
Total	290

Inclusion of poor people

Poorest	170
Others	102
Total	272
%	62.5

Poultry module info

Benchmark

Number of chicken

Max chicken	20
Min chicken	0
Farmers with chicken	265
Farmers without chicken	8
Total farmers	273
Total chicken	1204
Average chicken (of farmers with chicken)	4.54
Average chicken (of all farmers)	4.41

Poultry module info

Endline

Number of chicken

Max chicken	50
Min chicken	2
Farmers with chicken	290
Farmers without chicken	0
Total farmers	290
Total chicken	2777
Average chicken (of farmers with chicken)	9.58
Average chicken (of all farmers)	9.58

Number of chick

Max chick	30
Min chick	0
Farmers with chick	182
Farmers without chick	91
Total farmers	273
Total chick	1361
Average chick (of farmers with chick)	7.48
Average chick (of all farmers)	4.99

Number of chick

Max chick	74
Min chick	0
Farmers with chick	250
Farmers without chick	40
Total farmers	290
Total chick	4593
Average chick (of farmers with chick)	18.37
Average chick (of all farmers)	15.84

Number of duck

Max duck	25
Min duck	0
Farmers with duck	214
Farmers without duck	59
Total farmers	273
Total duck	1349
Average duck (of farmers withduck)	6.30
Average duck(of all farmers)	4.94

Number of duck

Max duck	28
Min duck	0
Farmers with duck	269
Farmers without duck	21
Total farmers	290
Total duck	2483
Average duck (of farmers withduck)	9.23
Average duck (of all farmers)	8.56

Number of duckling

Max duckling	30
Min duckling	0
Farmers with duckling	94
Farmers without duckling	179
Total farmers	273
Total duckling	573
Average duckling (of farmers withduckling)	6.10
Average duckling(of all farmers)	2.10

Number of duckling

Max duckling	25
Min duckling	0
Farmers with duckling	166
Farmers without duckling	124
Total farmers	290
Total duckling	1470
Average duckling (of farmers withduckling)	8.86
Average duckling(of all farmers)	5.07

Eggs per hen per year

Max	58
Min	4
Average	40.05

Eggs per hen per year

Max	182
Min	0
Average	94.12

Duck per hen per year

Max	100
Min	0
Average	51.06

Duck per hen per year

Max	260
Min	50
Average	133.76

Own egg consumption per week

Max	25
Min	0
Total	1476
Average	5.41
Farmers eat own eggs	250
Farmers not eat own eggs	23
Total farmers	273

Own egg consumption per week

Max	60
Min	0
Total	2988
Average	10.30
Farmers eat own eggs	286
Farmers not eat own eggs	4
Total farmers	290

Poultry consumption

Max	15
Min	0
Total	310
Average	1.14
Farmers eat own eggs	194
Farmers not eat own eggs	79
Total farmers	273

Poultry consumption

Max	20
Min	0
Total	689
Average	2.38
Farmers eat own eggs	264
Farmers not eat own eggs	26
Total farmers	290

Egg sold

Max	60
Min	0
Total	2538
Average	9.30
Farmers eat own eggs	162

Egg sold

Max	500
Min	0
Total	10789
Average	37.20
Farmers eat own eggs	269

Farmers not eat own eggs	111
Total farmers	273

Poultry sold

Max	160
Min	0
Total	2336
Average	8.56
Farmers eat own eggs	219
Farmers not eat own eggs	54
Total farmers	273

Decision making for Sell & Eat

Myself	166
My Spouse	45
Jointly	48
Not applicable	48
Total	307
Myself (%)	54.07
My spouse (%	14.66
Jointly (%)	15.64

Poultry vaccinated

Never	249
Sometimes	22
Always	1
Total farmers	272
Never (%)	91.54
Sometimes (%)	8.09
Always (%)	0.37

Farmers not eat own eggs	21
Total farmers	290

Poultry sold

Max	121
Min	0
Total	7774
Average	26.81
Farmers eat own eggs	278
Farmers not eat own eggs	12
Total farmers	290

Decision making for Sell & Eat

Myself	52
My Spouse	33
Jointly	205
Not applicable	0
Total	290
Myself (%)	17.93
My spouse (%	11.38
Jointly (%)	70.69

Poultry vaccinated

Never	3
Sometimes	114
Always	173
Total farmers	290
Never (%)	1.03
Sometimes (%)	39.31
Always (%)	59.66

Hazal use

Yes	10
No	262
Never	1
Total farmers	272
Yes (%)	3.68
No (%)	96.32
Never (%)	0.37

Hazal use

Yes	286
No	4
Never	0
Total farmers	290
Yes (%)	98.62
No (%)	1.38
Never (%)	0.00

Chick separation

After 1 week	4
After 2 weeks	2
After 3 weeks	1
After 4 weeks	3
Never	262
Total farmers	272

Chick separation

After 1 week	238
After 2 weeks	51
After 3 weeks	0
After 4 weeks	1
Never	0
Total farmers	290

Candling

Yes	9
No	263
Total farmers	272

Candling

Yes	290
No	0
Total farmers	290

Poultry rearing is Business

Yes	27
No	246
Total farmers	273
Yes (%)	9.89
No (%)	90.11

Poultry rearing is Business

Yes	290
No	0
Total farmers	290
Yes (%)	100
No (%)	0

Record

Yes	2
No	271
Total farmers	273
Yes (%)	0.73
No (%)	99.27

Record

Yes	289
No	1
Total farmers	290
Yes (%)	99.66
No (%)	0.34

Have market actor phone number

None	219
Myself	6
Spouse and or other	12
Total	237
Have number	
None (%)	92.41
Myself (%)	2.53
Spouse and or other (%)	5.06

Use frequency

sometimes	2
always	0
Never	32
Total	34
Use Frequency	
Sometimes (%)	5.88
Always (%)	0.00
Never (%)	94.12

Use of ICT for poultry rearing

Never	227
Sometimes	9
always	1
Total	237
Never (%)	95.78
Sometimes (%)	3.80
Always (%)	0

Have market actor phone number

None	1
Myself	183
Spouse and or other	106
Total	290
Have number	
None (%)	0.34
Myself (%)	63.10
Spouse and or other (%)	36.55

Use frequency

sometimes	118
always	65
Never	0
Total	183
Use Frequency	
Sometimes (%)	64.48
Always (%)	35.52
Never (%)	0

Use of ICT for poultry rearing

Never	79
Sometimes	158
always	53
Total	290
Never (%)	27.24
Sometimes (%)	54.48
Always (%)	0

Collectively Input collection

Yes	1
No	245
Total farmers	246
Yes (%)	0.41
No (%)	99.59

Collectively Input collection

Yes	287
No	3
Total farmers	290
Yes (%)	98.97
No (%)	1.03

Decision on input purchase (who)

Myself	175
Jointly	33
Spouse or other family member	17
Not applicable	48
Total	273
Myself (%)	64.10
Jointly (%)	12.09
Spouse or other family member (%)	6.23
Not applicable (%)	17.58

Decision on input purchase (who)

Myself	61
Jointly	177
Spouse or other family member	51
Not applicable	1
Total	290
Myself (%)	21.03
Jointly (%)	61.03
Spouse or other family member (%)	17.59
Not applicable (%)	0.34

Collective sell

Never	271
Sometimes	2
always	0
Total	273
Never (%)	99.27
Sometimes (%)	0.73
Always (%)	

Collective sell

Never	21
Sometimes	168
always	84
Total	273
Never (%)	7.69
Sometimes (%)	61.54
Always (%)	

RF support

Yes	0
no	163
Notapplicable	108
Total	271
Yes	
no	60.15
Not applicable	

RF support

Yes	290
no	0
Notapplicable	0
Total	290
Yes	100
no	0
Not applicable	0

Type of support from RF

Inputs purchase &selling	0
Technical	0
Never	96
Not applicable	177
Total	273
Inputs purchase &selling (%)	0
Technical (%)	0
Never (%)	35.16
Not applicable (%)	64.84

Type of support from RF

Inputs purchase&selling	235
Technical	55
Never	0
Not applicable	0
Total	290
Inputs purchase &selling (%)	81.03
Technical (%)	18.97
Never (%)	0
Not applicable (%)	0