**Supplementary file 1: Brucellosis Impact Assessment Household Questionnaire**

Data entry number: \_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| Interview number: |  | Governorate: |  |
| Interviewer name: |  Interview date: |
| Household address:  | Village: | District: |  |
| GPS: Latitude (N/S): |  | Longitude (E/W): |  |
| Consent obtained: |  *(if no, request replacement HH from supervisor)* |

**A. Household information**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Provide the following details about the HH **head**:

|  |  |
| --- | --- |
| a. Sex  | [\_] Male [\_] Female |
| b. Age (years) | \_\_\_\_\_\_\_\_\_ years |
| c. Level of education: (circle) | 1 = None2 = Primary3 = Preparatory  | 4 = Secondary (high school)5 = Tertiary (university)6 = Other:  |
| d. Primary activity (circle all that applicable) | 1 = Crop farming 2 = Animal keeping 3 = Trading in animals/animal products 4 = Trading in agricultural products 5 = Formal Salaried employee  | 6 = Business – trade / services (non-agric.)7 = Not working / unemployed8 = Old/Retired9 = Infant (<6 years)10 = Student/ pupil11 = Disabled12 = Other (specify) |

2. Provide the following details about the **respondent**:

|  |  |
| --- | --- |
| Position of the respondent in the household | 1 = Head 5= Son-in-law 9= Mother- in-law2 = Spouse 6= Daughter-in-law 10= Father-in-law3 = Daughter 7= Father of head 11=Other:\_\_\_\_\_\_\_4 = Son 8= Mother of head |
| If respondent is not the head, provide:  | Sex: [\_] Male [\_] FemaleAge: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_years |

 |

3. Provide the number of people in the HH (including the HH head):

|  |  |  |  |
| --- | --- | --- | --- |
|  |  Children ≤ 5 years | Children >5 to 18 years | Adults (>18 years) |
| a. Males  |  |  |  |
| b. Females |  |  |  |

4. How important is livestock as a source of income for the HH *(circle one)*?

|  |  |
| --- | --- |
| 1= Only income source2= Major income source3= Same importance as other income sources | 4= Minor income source 5= No or negligible 6= Don’t know |

5. Do you or anyone in your HH do paid work that is not farming? [\_] Yes [\_] No

 If Yes what work do they do?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. Do anyone in your HH work in another city and/or overseas and send money to the HH and/or contribute to HH expenses? [\_] Yes [\_] No

**B. Land and livestock ownership**

7. Please fill in the table below?

|  |  |  |
| --- | --- | --- |
| Type of tenure | Area/Kirrate | Cost of rent/LE/ Kirrate |
| Own and cultivate |  |  |
| Rent and cultivate |  |  |
| Own and a tenant cultivate it |  |  |

8. What animal species do you have in your HH? (Please give the number/spp.)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Animal spp. | Total | Adult female | Adult male | Replacement | Sold/year |
| Total | Lactating | Entire | Castrated | Mal | Female | Lamb | Adult |
| Cows |  |  |  |  |  |  |  |  |  |
| Buffalos |  |  |  |  |  |  |  |  |  |
| Sheep |  |  |  |  |  |  |  |  |  |
| Goat |  |  |  |  |  |  |  |  |  |

9. What other animal spp. do you have in your HH?

|  |  |
| --- | --- |
| Animal spp. | Number |
| Donkeys/horses |  |
| Poultry |  |
| Dogs |  |
| Cats |  |
| Others:  |  |

**C. Livestock productivity**

10. Which months of the year do you milk your animals?

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Jan | Feb | Mar | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|  |  |  |  |  |  |  |  |  |  |  |  |

11. How much milk do you usually produce?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Total amount produced/spp/day | Buffalos | Cows | Sheep | Goat |
| How many litres milked today |  |  |  |  |
| How many litres of milk per month |  |  |  |  |
| Amount sold/month |  |  |  |  |
| Number of animals milked |  |  |  |  |
| Price paid for milk (ALL/litre) |  |  |  |  |

12. How many females used for breeding in the last 12 months and how many calves, lambs/kids born?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Animal spp. | Buffalo | Cow | Sheep | Goat |
| Females for breading  |  |  |  |  |
| Calves, kids/lambs  |  |  |  |  |

13. Which months of the year are calves, lambs and kids born?

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Jan | Feb | Mar | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
| Calves |  |  |  |  |  |  |  |  |  |  |  |  |
| Lambs |  |  |  |  |  |  |  |  |  |  |  |  |
| Kids |  |  |  |  |  |  |  |  |  |  |  |  |

14. How many claves, lambs and/or kids kept for breeding?

|  |  |  |  |
| --- | --- | --- | --- |
| Sex | Calves | Lambs | Kids |
| Female |  |  |  |
| Male |  |  |  |

15. Which age do you sell claves, lambs and/or kids and where?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Age  | Butcher | Market | Replacement |
| Calves |  |  |  |  |
| Lambs |  |  |  |  |
| Kids |  |  |  |  |

16. Do you keep different animal spp. in the same house?

 [\_] Yes all the time [\_] Yes at day time only [\_] Yes at night only [\_] No

17. Do you keep male and female animals together in the same place?

 [\_] Yes all the time [\_] Yes at day time only [\_] Yes at night only [\_] No

18. How many adult animals have been culled last year, why, what age and how?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Animal spp. | No/year | Age/month | Reason (select all that applicable) | How? |
| Cows |  |  | Abortion □ Infertility □ Decreased milk production □ Mastitis □ Old age □ Other:  |  |
| Buffalos |  |  | Abortion □ Infertility □ Decreased milk production □ Mastitis □ Old age □ Other:  |  |
| Sheep |  |  | Abortion □ Infertility □ Decreased milk production □ Mastitis □ Old age □ Other:  |  |
| Goat |  |  | Abortion □ Infertility □ Decreased milk production □ Mastitis □ Old age □ Other:  |  |

19. In the last 12 months do you have any cases of abortion in your HH animals?

 [\_] Yes [\_] No (If No please go to QS 21)

20. If yes, how many cases of abortions do you have in your HH in the last 12 months?

|  |  |  |  |
| --- | --- | --- | --- |
| Type of animals | No of abortion cases | Stage of gestation | Potential cause |
| Cows |  |  |  |
| Buffalos |  |  |  |
| Sheep |  |  |  |
| Goat  |  |  |  |

21. When do you have cases of abortion what do you do?

|  |  |
| --- | --- |
| Action by farmer | Costs/LE |
| Fee | Medications | Disinfection | Other costs |
| Call GOVS veterinarians  |  |  |  |  |
| Call private veterinarian |  |  |  |  |
| Call vet. paramedical |  |  |  |  |
| Someone from the community |  |  |  |  |
| Others: |  |  |  |  |

22. Do you take biological samples for lab diagnosis of the cause of abortion?

[\_] Yes [\_] No (If No please go to QS 27)

23. If yes, what types of samples do you take?

|  |  |
| --- | --- |
| Types of samples | [\_] Yes [\_] No |
| Blood |  |
| Vaginal swabs |  |
| Tissues/organs from aborted feti |  |
| Faetal membranes  |  |
| Others: |  |

24. Who did take the samples?

[\_] GOVS vet [\_] Private vet [\_] Vet paramedical [\_] Others:……………………………

25. Where samples are analysed?

 [\_] GOVS lab [\_] Private lab [\_] others:…………………………………………………

26. What were the results of the analysis of abortion cases in the last 12 months?

…………………………………………………………………………………………………..

27. Do you notify the authorities when you have abortion in your HH animals?

[\_] Yes [\_] No

28. If yes what actions do the authorities take?

…………………………………………………………………………………………………..

29. If No, why don’t you notify?

………………………………………………………………………………………………….

30. What do you do with aborted animals?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Type of animals | Treat and keep for reproduction | Treat and keep for fattening | Sell for reproduction | Sell for slaughtering | Slaughter for home consumption |
| Cows | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No |
| Buffalos | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No |
| Sheep | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No |
| Goat  | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No |

31. What do you do with aborted faeti and other wastes?

|  |  |  |  |
| --- | --- | --- | --- |
|  | Usually | Sometimes | Never |
| Throw in the street |  |  |  |
| Throw in or beside water canals |  |  |  |
| Compost |  |  |  |
| Used as feed for your bets (dogs/cats) |  |  |  |
| Burning |  |  |  |
| Burying |  |  |  |
| Others: |  |  |  |

32. If the aborted animal is lactating, what do you do with its milk?

|  |  |  |  |
| --- | --- | --- | --- |
|  | Always | Sometimes | Never |
| Consume it raw without any heat treatment |  |  |  |
| Pasteurisation/boiling before consumption |  |  |  |
| Used for processing homemade cheese |  |  |  |
| Used for processing cream |  |  |  |
| Used for processing butter |  |  |  |
| Used for processing ghee |  |  |  |
| Sell it raw |  |  |  |
| Throw away  |  |  |  |
| Mix it with other animals milk |  |  |  |
| Others: |  |  |  |

**D. Livestock production costs**

33. What type of feed do you use for your HH animals and where do you get it from?

|  |  |  |  |
| --- | --- | --- | --- |
| Type of feed | Amount/HH/day/ Kg  | Source | Cost/day/LE |
| a. Branded commercial feed |  |  |  |
| b. Unbranded feed |  |  |  |
| c. Home-made feed |  |  |  |
| d. Rice or wheat waste |  |  |  |
| e. Other crop waste |  |  |  |
| f. green feed such as alfa alfa and corn |  |  |  |
| g. Corn silage |  |  |  |
| h. Other:………………….. |  |  |  |

34. What is the daily cost for feeding (total feed) the following animals?

|  |  |
| --- | --- |
| Animal spp. | Cost/LE/day |
| Dairy buffalo> 2 years |  |
| Dairy cow> 2 years |  |
| Fattening buffalo> 2 years |  |
| Fattening cow> 2 years |  |
| Sire |  |
| Buffalo from 1-2 years |  |
| Cow from 1-2 years |  |
| Cow/buffalo<1 year |  |
| Dairy sheep> 6 months |  |
| Dairy goat > 6 months |  |
| Fattening sheep> 6 months |  |
| Fattening goat > 6 months |  |
| Sheep/goat<6 months |  |

 35. What is the main source of water for your HH animals? (Circle all that apply)

|  |  |
| --- | --- |
| **1** = Main water supply**2** = Agricultural canal | **3** = Ground water**4** = Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

36. How much dose water cost you? …………………………….. LE/Month

**E. Marketing of animals and animal products**

37. Where do you sell/buy livestock?

|  |  |  |  |
| --- | --- | --- | --- |
| Market | Usually | Sometimes | Never |
| In the same village |  |  |  |
| In the neighbouring villages |  |  |  |
| Far villages within the same district |  |  |  |
| Outside your district but in your governorate |  |  |  |
| In other governorates |  |  |  |

38. Where do you sell/buy livestock products such as milk and dairy products?

|  |  |  |  |
| --- | --- | --- | --- |
| Market | Usually | Sometimes | Never |
| In the same village |  |  |  |
| In the neighbouring villages |  |  |  |
| Far villages within the same district |  |  |  |
| Outside your district but in your governorate |  |  |  |
| In other governorates |  |  |  |

39. To whom do you sell your milk/dairy products?

|  |  |  |  |
| --- | --- | --- | --- |
|  | Always | Sometimes | Never |
| a. Direct to consumer |  |  |  |
| b. Trader/ transporter |  |  |  |
| c. Wholesaler |  |  |  |
| d. Retailer |  |  |  |
| e. Workers |  |  |  |

40. Do you do any processing for milk at home? [\_] Yes [\_] No

|  |  |  |  |
| --- | --- | --- | --- |
| Processing | Always | Sometimes | Never |
| Pasteurisation/boiling |  |  |  |
| Homemade cheese |  |  |  |
| Cream |  |  |  |
| Butter |  |  |  |
| Ghee |  |  |  |
| Other products: |  |  |  |

41. Do you think prices of milk and dairy products are affected by animal diseases in the last 12 months?

 [\_] Yes I think so [\_] No I don’t think so [\_] I don’t know

42. Do you think consumers were worried about consumption of milk and dairy products due to animal infections?

[\_] Yes I think so [\_] No I don’t think so [\_] I don’t know

**F. Livestock owners KAP for brucellosis**

43. Have you ever heard about a disease called brucellosis before?

[\_] Yes [\_] No [\_] I don’t know

44. If yes, from where? (select all that applicable)

[\_] Media [\_] Neighbors [\_] Vetrinarians

45. Have you ever attended any extension campaign /meeting on brucellosis?

 [\_] Yes [\_] No

46. If yes, who did organize this meeting? …………………………………..

47. In your opinion, what are the most susceptible animal species to *Brucella* infection?

|  |  |  |
| --- | --- | --- |
| Animal spp. | Age/month | Susceptibility to *Brucella* (1=high to 5= not susceptible) |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

48. In the last 12 months have any of your HH ruminants get infected with *Brucella*?

[\_] Yes I think so [\_] No I don’t think so [\_] I don’t know

49. If yes how did you know?

…………………………………………………………………………………………….

50. If yes what have you did with the infected animal?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Type of animals | Treat and keep for reproduction | Treat and keep for fattening | Sell for reproduction | Sell for slaughtering | Slaughter for home consumption |
| Cows | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No |
| Buffalos | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No |
| Sheep | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No |
| Goat  | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No | [\_] Yes [\_] No |

51. What do you do with milk produced from animal infected with *Brucella*?

|  |  |  |  |
| --- | --- | --- | --- |
|  | Always | Sometimes | Never |
| Consumed raw |  |  |  |
| Pasteurisation/boiling before consumption |  |  |  |
| Used for processing homemade cheese |  |  |  |
| Used for processing cream |  |  |  |
| Used for processing butter |  |  |  |
| Used for processing ghee |  |  |  |
| Sell it raw |  |  |  |
| Throw away  |  |  |  |
| Mix it with other animals milk |  |  |  |
| Others: |  |  |  |

52. Have you notified the authorities when you have potentially infected animal/s with *Brucella*? [\_] Yes [\_] No

53. If yes, what are the actions that have been taken by authorities upon your notification?

…………………………………………………………………………………………………..

54. If No, why haven’t you notified?

………………………………………………………………………………………………….

55. What are protective measures do you apply to protect your HH ruminants from infection with *Brucella*?

|  |  |
| --- | --- |
| Protective measures | Cost/animal/LE |
|  |  |
|  |  |
|  |  |
|  |  |

56. Other than Brucellosis, what are the most common diseases affect your ruminants in the last 12 months?

|  |  |
| --- | --- |
| Animal spp. | Disease |
|
| Buffalo |  |
|  |
|  |
|  |
|  |
| Cow |  |
|  |
|  |
|  |
|  |
| Sheep |  |
|  |
|  |
|  |
|  |
| Goat |  |
|  |
|  |
|  |
|  |

57. In your opinion, what are the most dangerous diseases for your HH ruminants that you always worried about? (Please give a rank)

|  |  |
| --- | --- |
| Disease list | 1=Most dangerous to 5=less dangerous |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

58. Do you vaccinate your animals against brucellosis?

 [\_] Yes [\_] No [\_] I don’t know

59. If yes, who vaccinate your animals?

[\_] GOVS vet free of charge [\_] GOVS vet with charge [\_] Private vet

[\_] Vet paramedical [\_] Others:……………………………

60. Do you pay for vaccinating your animals against brucellosis?

[\_] Yes [\_] No

61. If Yes, how much does it cost you to vaccinate the following animal spp.?

|  |  |
| --- | --- |
| Animal spp. | Costs/LE/head |
| Vaccine | Fee for vet | Other logistics costs |
| Buffalo  |  |  |  |
| Cow |  |  |  |
| Sheep |  |  |  |
| Goat |  |  |  |

62. If no, in the future will you vaccinate your ruminants against brucellosis?

 [\_] Yes [\_] No [\_] I don’t know

63. Other than brucellosis what are other diseases that you vaccinate your HH ruminants against? (Please complete the table below, if you don’t pay, please mention the disease)

|  |  |  |
| --- | --- | --- |
| Animal spp. | Disease | Costs/LE/head |
| Vaccine | Fee for vet | Other logistics costs |
| Buffalo |  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Cow |  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Sheep |  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Goat |  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

64. Do you think *Brucella* can be transmitted to humans?

[\_] Yes I think so [\_] No I don’t think so [\_] I don’t know

65. If yes, in your opinion how *Brucella* can be transmitted to humans? (Please rank from 1 to 5)

|  |  |
| --- | --- |
| Exposure route | 1=Most dangerous to 5=less dangerous |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

65. What are protective measures do you apply to protect yourself and other HH members from *Brucella* infection?

|  |  |
| --- | --- |
| Protective measures | Cost/person/LE |
|  |  |
|  |  |
|  |  |
|  |  |

66. When do you have infected animal with *Brucella* at the HH, do you or your HH members have been worried from eating milk/dairy products? [\_] Yes [\_] No

**G. Health information**

|  |
| --- |
| 67. Did anyone in your HH experience the following in the last 2 weeks? If not, did they experience in the last 6 months? Write the **number** of illnesses? |
|  | In the last **two weeks** *(put 0 if no occurrence)* |
| 1. Fever
 |  |
| 1. Muscle pain
 |  |
| 1. Headache
 |  |
| 1. Diarrhoea
 |  |
| 1. Vomiting
 |  |
| 1. Stomach pain
 |  |
| 1. Other:
 |  |
|  | In the last **six months** *(put 0 if no occurrence)* |
| 1. Fever
 |  |
| 1. Muscle pain
 |  |
| 1. Headache
 |  |
| 1. Diarrhoea
 |  |
| 1. Vomiting
 |  |
| 1. Stomach pain
 |  |
| 1. Other:
 |  |

68. The last time you or someone in the HH had fever or any other symptoms, have been diagnosed as being infected with *Brucella*? [\_] Yes [\_] No

69. If yes what did you or anyone in the HH do?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Travel cost (LE) | Doctors fee (LE) | Medicines cost (LE) | Other costs (LE) |
| 1. Treated at home by family
 |  |  |  |  |
| 1. Treated by someone in community
 |  |  |  |  |
| 1. Got medicines from pharmacy
 |  |  |  |  |
| 1. Visited doctor’s clinic
 |  |  |  |  |
| 1. Stayed in hospital or clinic for treatment
 |  |  |  |  |
| 1. Other:
 |  |  |  |  |

70. How many days did you or this person take-off of work? \_\_\_\_\_\_\_\_\_\_\_days

71. How much money did you lost because of take-off of work? \_\_\_\_\_\_\_\_\_\_LE/day

Enumerator’s comments:

|  |
| --- |
|  |