

AMUSE Livestock, version 2 - Antimicrobial use in livestock production

A tool to harmonise data collection on knowledge, attitude and practices

This tool has been prepared with the support of the Livestock Health flagship of the CGIAR research program (CRP) on Livestock and the Improving Human Health flagship of the CRP Agriculture for Nutrition and Health

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October 2019

CGIAR is a global partnership that unites organizations engaged in research for a food-secure future. The CGIAR Research Program on Livestock provides research-based solutions to help smallholder farmers, pastoralists and agro-pastoralists transition to sustainable, resilient livelihoods and to productive enterprises that will help feed future generations. It aims to increase the productivity and profitability of livestock agri-food systems in sustainable ways, making meat, milk and eggs more available and affordable across the developing world. The Program brings together five core partners: the International Livestock Research Institute (ILRI) with a mandate on livestock; the International Center for Tropical Agriculture (CIAT), which works on forages; the International Center for Research in the Dry Areas (ICARDA), which works on small ruminants and dryland systems; the Swedish University of Agricultural Sciences (SLU) with expertise particularly in animal health and genetics and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) which connects research into development and innovation and scaling processes.

The Program thanks all donors and organizations who globally support its work through their contributions to the [CGIAR Trust Fund](#).

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AMUSE Livestock, version 2 - Antimicrobial use in livestock production

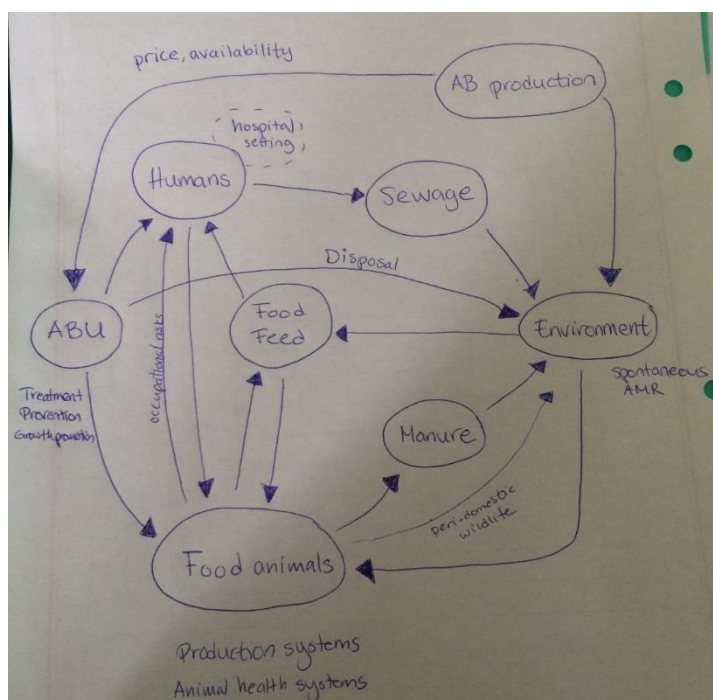
A tool to harmonise data collection on knowledge, attitude and practices

Background

Antimicrobial resistance has been recognised as a major threat to public and livestock health. As a consequence more research is being conducted in this field, including research on use of antimicrobials in the agricultural sector, especially in livestock production. Data and knowledge of use of antimicrobials in low and middle income countries (LMIC) is scarce and no centralised reporting and recording systems exist for monitoring purposes.

Given the recent increase in numbers of research and development projects focussing on antimicrobials in livestock production, a lot of data can be collected and compared if tools used share common questions. A more harmonised approach to data collection on AM use can potentially provide important information on trends of antimicrobial use and areas of particular concern.

This questionnaire was developed to investigate key linkages in the AMR conceptual framework outlined below (adapted from Woolhouse et al, 2015):



and is meant to provide a core set of questions that may ease comparisons of data from different regions of the world collected in different studies in different production systems.

Different projects have different purposes and objectives and thus may need additional questions. Therefore the questionnaire may then be expanded with other questions for more in depth study of particular aspects of AMU/AMR in the livestock sector or to fulfil other study objectives.

The AMUSE Livestock questionnaire has been tested in Ethiopia, Kenya and Uganda and from experience takes about 30- 40 minutes to complete. The questionnaire presented below is the 2nd version of the tool. The first version has been revised based on experiences of researchers using the tools and a study conducted using cognitive interviews with respondents has helped to restructure the questionnaire and rephrase some of the questions.

Check-list before the interview:

- ✓ Find out and document the broader context of access (including legalisation related to) to animal health service and pharmaceuticals (incl antimicrobials) for the study site.
- ✓ Consider other surveys or national inventories that have been made at the study site.
- ✓ Always pre-test the questionnaire on farmers.
- ✓ Consider data-collection format/layout
- ✓ In preparation for questions on specific drugs used, get pictures or samples of commonly used drugs (all veterinary drugs, not only antibiotics) and organise them into the following drug classes:

1 Vaccines
2 Anthelmintics (Albendazol, etc.)
3 Acaricides (ectoparasites)
4 Tetracyclines
5 Sulphonamides
6 Penicillin (and combinations with Penicillin)
7 Fluoroquinolones
8 Macrolides
9 Aminoglycosides
10 Other antibiotics (specify)
11 Vitamins/Iron supplements
12 Other drugs (specify)

- ✓ When using drug samples, bring them along as a 'drug basket/box' to ask which of these are commonly used. This may help with recall.
- ✓ Consider complementing questionnaire by observational data (ideally photo).
- ✓ Obtaining accurate numbers of livestock can be a challenge in some communities, especially pastoralists. Interviewers should be trained to use proxy indicators or estimates by observation where no direct answers are forthcoming (p.e. question 17).
- ✓ Ensure ethical clearance for your study has been obtained: details on informed consent, purpose of study, guaranteed anonymity, feedback of information to community

The AMUSE Livestock KAP tool is available electronically (in ODK), for further information and to receive the necessary files, please contact Barbara Wieland at ILRI (b.wieland@cgiar.org).

AMUSE Livestock tool, version 2

Criteria for selecting respondent: person who plays a major role in the management of livestock
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Interview specifications	
1. Questionnaire ID	
2. Date of Survey (DD/MM/YYYY)	

3. Time interview started (HH:MM)	<i>(Automatically generated by tablet)</i>
4. Time interview ended (HH:MM)	<i>(Automatically generated by tablet)</i>
5. Interview done via interpreter	<input type="checkbox"/> Yes <input type="checkbox"/> No
6. Consent received (signature on form if literate)	<input type="checkbox"/> Yes <input type="checkbox"/> No
7. Respondent's sex	<input type="checkbox"/> Male <input type="checkbox"/> Female

Enumerator specifications	
8. Enumerator's name <i>(First Name and Last Name)</i>	
9. Enumerator's sex	<input type="checkbox"/> Male <input type="checkbox"/> Female

Farm specifications	
10. District/County	<i>(List of all districts pre-coded)/County</i>
11. Sub-county	<i>(List of all sub counties pre-coded)</i>
12. Parish/Ward	<i>(List of all parishes pre-coded)/Wards</i>
13. Village/ Sub-location	<i>(List of all village pre-coded)/Sub- locations</i>
14. GPS Coordinates	<i>(Automatically generated by tablet)</i>
15. Type of farm	<input type="checkbox"/> Household farm <input type="checkbox"/> Commercial farm

FARM CHARACTERISTICS

16. What animals do you keep?
Let the respondent answer freely then probe for the other options

- ☐ Cows/Cattle
- ☐ Pigs
- ☐ Chickens or other birds
- ☐ Goats
- ☐ Sheep
- ☐ Horses or donkeys
- ☐ Camels

Animal specific section – Cows/ Cattle

17. Let's talk about your Cows/ Cattle	<i>Write number</i>
a. How many bulls above the age of 2 years do you have?	_____
b. How many cows above the age of 2 years do you have?	_____
c. How many young cattle above the age of 6 months do you have?	_____
d. How many calves below the age of 6 months do you have?	_____
18. Are your cows dairy (Milk) or beef (Meat) cows?	<input type="checkbox"/> Dairy <input type="checkbox"/> Both dairy and beef <input type="checkbox"/> Beef
18b) What is the breed of your cows (the majority)	<input type="checkbox"/> indigenous <input type="checkbox"/> cross-breed <input type="checkbox"/> exotic

19. How are you keeping/ grazing the cows? (multiple answers possible, max 2 options)	<input type="checkbox"/> Zero-grazing <input type="checkbox"/> Fenced grazing <input type="checkbox"/> Tethered grazing <input type="checkbox"/> Pastoral grazing <input type="checkbox"/> other
20. Do the cows stay at farm or leave the farm for communal grazing?	<input type="checkbox"/> Stay at farm <input type="checkbox"/> Communal grazing
21. What do you do with the manure from the cows?	<input type="checkbox"/> Use as fertilizer <input type="checkbox"/> Use as fuel (incl. biogas) <input type="checkbox"/> Sell it (or trade it) <input type="checkbox"/> Give it away <input type="checkbox"/> Leave it where dropped Other: _____

22. What feed do you use for the cows?	
a. Do you use grain or crop residues?	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Do you use household waste from your home or from somewhere else?	<input type="checkbox"/> Yes <input type="checkbox"/> No
c. Do you use commercial pre-mixed feed?	<input type="checkbox"/> Yes <input type="checkbox"/> No
d. Do you mix your own feed ratios?	<input type="checkbox"/> Yes <input type="checkbox"/> No

<p>23. From the drugs shown how many times have you used them in cows in the last 4 weeks. <i>Alternatively ask to see packaging of commonly used drugs and classify according to list below.</i></p> <p>For drugs used, please indicate the reason for use: multiple options for each drug possible</p> <p>Preparatory work: provide photographs of common veterinary drugs for each of the drug class or provide a box/basket with commonly used drugs, mark drugs or picture of drugs with 'drug class number' as used in drop-down menu</p>					
Drug	Number of times used	Prevent disease	Treat sick animal	Fattening	Other
1 Vaccines					
2 Anthelmintics (Albendazol, etc.)					
3 Acaricides (ectoparasites)					
4 Tetracyclines					
5 Sulphonamides					
6 Penicillin (and combinations with Penicillin)					
7 Fluoroquinolones					
8 Macrolides					
9 Aminoglycosides					
10 Other antibiotics (specify)					
11 Vitamins/Iron supplements					
12 Other drugs (specify)					
13 Drugs intended for human consumption					
14 other treatment options, please specify					

<p>24. For the two most commonly used drugs Q23 (max. 2 drugs)- Drug Option 1 <i>Question 24 needs to be asked twice (for 2 drugs), add field for 'drug' ID, can be number of drug class above.</i></p>	
a. Who administered the drug the last time you used it?	<input type="checkbox"/> I myself <input type="checkbox"/> Veterinarian <input type="checkbox"/> Other: _____

b. Which cows were given the drug the last time you used it?	<input type="checkbox"/> All animals <input type="checkbox"/> All animals of a certain age <input type="checkbox"/> Sick animals <input type="checkbox"/> Animals that should be sold <input type="checkbox"/> Animals that was just bought
c. Where did you get the drug from? <i>Enumerator to probe if veterinary drug store/Agrovet/ Human Pharmacy/from market for the specific name of the store to be used later while collecting veterinary drug samples</i>	<input type="checkbox"/> From veterinary drug store/Agrovet <input type="checkbox"/> From human pharmacy <input type="checkbox"/> From the vet <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> From the market <input type="checkbox"/> From traders passing by <input type="checkbox"/> From friends/neighbours/family <input type="checkbox"/> Other:.....
d. How did you know how to use the drug?	<input type="checkbox"/> My own knowledge <input type="checkbox"/> Advice from veterinarian <input type="checkbox"/> Advice from other animal health service provider <input type="checkbox"/> Advice from pharmacist/drug store <input type="checkbox"/> Advice from neighbour/friend <input type="checkbox"/> Advice from package/label of the drug <input type="checkbox"/> Advice from other: _____
e. Was the drug treatment successful?	<input type="checkbox"/> Yes, completely <input type="checkbox"/> Yes, partly <input type="checkbox"/> No

25. For the two most commonly used drugs Q23 (max. 2 drugs)- Drug Option 2 <i>Question 24 needs to be asked twice (for 2 drugs), add field for 'drug' ID, can be number of drug class above.</i>	
a. Who administered the drug the last time you used it?	<input type="checkbox"/> I myself <input type="checkbox"/> Veterinarian <input type="checkbox"/> Other: _____
b. Which cows were given the drug the last time you used it?	<input type="checkbox"/> All animals <input type="checkbox"/> All animals of a certain age <input type="checkbox"/> Sick animals <input type="checkbox"/> Animals that should be sold <input type="checkbox"/> Animals that was just bought
c. Where did you get the drug from? <i>Enumerator to probe if veterinary drug store/Agrovet/ Human Pharmacy/from market for the specific name of the store to be used later while collecting veterinary drug samples</i>	<input type="checkbox"/> From veterinary drug store/Agrovet <input type="checkbox"/> From human pharmacy <input type="checkbox"/> From the vet <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> From the market <input type="checkbox"/> From traders passing by <input type="checkbox"/> From friends/neighbours/family <input type="checkbox"/> Other:.....

d. How did you know how to use the drug?	<input type="checkbox"/> My own knowledge <input type="checkbox"/> Advice from veterinarian <input type="checkbox"/> Advice from other animal health service provider <input type="checkbox"/> Advice from pharmacist/drug store <input type="checkbox"/> Advice from neighbour/friend <input type="checkbox"/> Advice from package/label of the drug <input type="checkbox"/> Advice from other: _____
e. Was the drug treatment successful?	<input type="checkbox"/> Yes, completely <input type="checkbox"/> Yes, partly <input type="checkbox"/> No
f. Where do you normally keep the drug (s) bought?	<input type="checkbox"/> In a cabinet <input type="checkbox"/> In a shelf <input type="checkbox"/> In the animal house <input type="checkbox"/> Other: _____

26. Overall, how much did you spend on veterinary drugs for cows in the last 4 weeks?	
In total (in local currency)	
Provide split of total if possible	
a. Vitamins?	_____ <input type="checkbox"/> Don't know
b. Vaccines?	_____ <input type="checkbox"/> Don't know
c. Dewormer?	_____ <input type="checkbox"/> Don't know
d. Antibiotics?	_____ <input type="checkbox"/> Don't know
e. Acaricides	_____ <input type="checkbox"/> Don't know
f. Any other drugs used during the last 12 months? Including traditional medicines	_____

27. What do you do to keep your cows healthy, so they don't get sick? <i>Do not read options!</i>	<input type="checkbox"/> Clean/disinfect <input type="checkbox"/> Vet drugs (incl. vaccine) <input type="checkbox"/> Keep well fed <input type="checkbox"/> Special feed (incl. supplements) <input type="checkbox"/> Fencing <input type="checkbox"/> Avoid mixing with other herd/flock <input type="checkbox"/> Other: _____
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28. When was the last time a cow was sick?	<input type="checkbox"/> <1 month ago <input type="checkbox"/> 1-6 months ago <input type="checkbox"/> 7-12 months ago <input type="checkbox"/> >12 months ago <input type="checkbox"/> Never been sick
29. What kind of disease was it? (select most appropriate group based on clinical sign or disease name given)	<input type="checkbox"/> Respiratory <input type="checkbox"/> Digestive/intestinal tract <input type="checkbox"/> Reproductive <input type="checkbox"/> Mastitis <input type="checkbox"/> Sudden death <input type="checkbox"/> Skin disease/wounds <input type="checkbox"/> External parasites <input type="checkbox"/> Neurological signs <input type="checkbox"/> Other _____
30. What did you do when the cows were sick? (do not read option, select most suitable answer)	<input type="checkbox"/> Use traditional medicine <input type="checkbox"/> Use medicine from the veterinary drug store (self-bought) <input type="checkbox"/> Consult traditional healer <input type="checkbox"/> Consults community animal health worker <input type="checkbox"/> Consult official veterinarian <input type="checkbox"/> Consult private veterinarian <input type="checkbox"/> Vet applied/left drugs <input type="checkbox"/> Other: _____
31. Who did you turn to for help with diagnosis and treatment?	<input type="checkbox"/> No-one <input type="checkbox"/> Private veterinarian <input type="checkbox"/> Government veterinarian <input type="checkbox"/> Pharmacist/drug store <input type="checkbox"/> Community animal health worker <input type="checkbox"/> Neighbour/friend <input type="checkbox"/> Other: _____
32. Do you keep records of treatments administered?	<input type="checkbox"/> Yes <input type="checkbox"/> No
33. What did you do with the milk of the sick animals during and a few days after treatment?	<input type="checkbox"/> Used it normally (consume or sell) <input type="checkbox"/> Mixed it with milk from other cows <input type="checkbox"/> Threw it away <input type="checkbox"/> Gave to other animals (p.e. pets, pigs) <input type="checkbox"/> Other, please specify
34. What do you normally do if a sick cow did not improve after treatment or died a few days after treatment?	<input type="checkbox"/> Used it normally (consume or sell) <input type="checkbox"/> Buried the dead animal <input type="checkbox"/> Burnt the dead animal <input type="checkbox"/> Threw it away <input type="checkbox"/> Fed to other animals (p.e. dogs) Other, please specify

Animal specific section – chickens

35. How many chickens or other birds do you have?	<i>Write number</i>
Chickens	_____
Turkeys	_____
Ducks	_____
Other: _____	_____

36. What is the main purpose of keeping birds	<input type="checkbox"/> layers (egg production) <input type="checkbox"/> mainly for own consumption <input type="checkbox"/> mainly for sale <input type="checkbox"/> broilers (meat) <input type="checkbox"/> mainly for own consumption <input type="checkbox"/> mainly for sale <input type="checkbox"/> produce Day Old Chicks (DOC) <input type="checkbox"/> mainly for own consumption <input type="checkbox"/> mainly for sale <input type="checkbox"/> mix of the above
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37. How are you keeping the chickens?	<input type="checkbox"/> Housed day and night <input type="checkbox"/> Free-range at day - housed at night <input type="checkbox"/> Free-range day and night
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38. What feed do you use for the chickens?	
a. Do you use grain or crop residues?	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Do you use household waste from your home or from somewhere else?	<input type="checkbox"/> Yes <input type="checkbox"/> No
c. Do you use commercial pre-mixed feed?	<input type="checkbox"/> Yes <input type="checkbox"/> No
d. Other (to specify)----	

39. What do you do with the manure from the chickens?	<input type="checkbox"/> Use as fertilizer <input type="checkbox"/> Use as fuel (incl. biogas) <input type="checkbox"/> Sell it (or trade it) <input type="checkbox"/> Give it away <input type="checkbox"/> Leave it where dropped
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	Other _____
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40. From the drugs shown how many times have you used them in birds in the last 4 weeks.
Alternatively ask to see packaging of commonly used drugs and classify according to list below.

For drugs used, please indicate the reason for use: multiple options for each drug possible

Preparatory work: provide photographs of common veterinary drugs for each of the drug class or provide a box/basket with commonly used drugs, mark drugs or picture of drugs with 'drug class number' as used in drop-down menu

Drug	Number of times used	Prevent disease	Treat sick animal/Bird	Fattening	Other
1 Vaccines					
2 Anthelmintics (Albendazol, etc.)					
3 Acaricides (ectoparasites)					
4 Tetracyclines					
5 Sulphonamides					
6 Penicillin (and combinations with Penicillin)					
7 Fluoroquinolones					
8 Macrolides					
9 Aminoglycosides					
10 Other antibiotics (specify)					
11 Vitamins/Iron supplements/mineral supplements					
12 Other drugs (specify)					
13 Drugs intended for human consumption					

41. For the two most commonly used drugs Q40 answer the following question (max 2 drugs)- Drug option 1
Question 41 needs to be asked twice (for 2 drugs), add field for 'drug' ID, can be number of drug class above

a. Who administered the drug the last time you used it?	<input type="checkbox"/> I myself <input type="checkbox"/> Veterinarian <input type="checkbox"/> Other: _____
b. Which chicken/birds were given the drug the last time you used it?	<input type="checkbox"/> All birds <input type="checkbox"/> All birds of a certain age <input type="checkbox"/> Sick birds <input type="checkbox"/> Birds that should be sold <input type="checkbox"/> birds that were just bought

<p>c. Where did you get the drug from? <i>Enumerator to probe if veterinary drug store/Agrovet/ Human Pharmacy/from market for the specific name of the store to be used later while collecting veterinary drug samples</i></p>	<input type="checkbox"/> From veterinary drug store <input type="checkbox"/> From human pharmacy <input type="checkbox"/> From the vet <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> From the market <input type="checkbox"/> From traders passing by <input type="checkbox"/> From friends/neighbours/family <input type="checkbox"/> Other:.....
<p>d. How did you know how to use the drug?</p>	<input type="checkbox"/> My own knowledge <input type="checkbox"/> Advice from veterinarian <input type="checkbox"/> Advice from other animal health service provider (p.e. community animal health worker) <input type="checkbox"/> Advice from pharmacist/drug store/Agrovet <input type="checkbox"/> Advice from neighbour/friend <input type="checkbox"/> Advice from package/label of the drug <input type="checkbox"/> Advice from other: _____
<p>e. Was the drug treatment successful?</p>	<input type="checkbox"/> Yes, completely <input type="checkbox"/> Yes, partly <input type="checkbox"/> No

<p>42. For the two most commonly used drugs Q40 answer the following question (max 2 drugs)- Drug option 2 <i>Question 41 needs to be asked twice (for 2 drugs), add field for 'drug' ID, can be number of drug class above</i></p>	
<p>a. Who administered the drug the last time you used it?</p>	<input type="checkbox"/> I myself <input type="checkbox"/> Veterinarian <input type="checkbox"/> Other: _____
<p>b. Which chicken/birds were given the drug the last time you used it?</p>	<input type="checkbox"/> All birds <input type="checkbox"/> All birds of a certain age <input type="checkbox"/> Sick birds <input type="checkbox"/> birds that should be sold <input type="checkbox"/> birds that were just bought
<p>c. Where did you get the drug from? <i>Enumerator to probe if veterinary drug store/Agrovet/ Human Pharmacy/from market for the specific name of the store to be used later while collecting veterinary drug samples</i></p>	<input type="checkbox"/> From veterinary drug store <input type="checkbox"/> From human pharmacy <input type="checkbox"/> From the vet <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> From the market <input type="checkbox"/> From traders passing by <input type="checkbox"/> From friends/neighbours/family <input type="checkbox"/> Other:.....
<p>d. How did you know how to use the drug?</p>	<input type="checkbox"/> My own knowledge <input type="checkbox"/> Advice from veterinarian <input type="checkbox"/> Advice from other animal health service provider (p.e. community animal health worker) <input type="checkbox"/> Advice from pharmacist/drug store/Agrovet <input type="checkbox"/> Advice from neighbour/friend <input type="checkbox"/> Advice from package/label of the drug <input type="checkbox"/> Advice from other: _____

e. Was the drug treatment successful?	<input type="checkbox"/> Yes, completely <input type="checkbox"/> Yes, partly <input type="checkbox"/> No
f. Where do you normally keep the drug (s) bought?	<input type="checkbox"/> In a cabinet <input type="checkbox"/> In a shelf <input type="checkbox"/> In the animal/chicken house <input type="checkbox"/> Other: _____

43. How much did you spend on veterinary drugs for chicken/birds in the last 4 weeks?	
In total (in local currency)	
Provide split of total if possible	
a. Vitamins?	_____ <input type="checkbox"/> Don't know
b. Vaccines?	_____ <input type="checkbox"/> Don't know
g. Dewormer?	_____ <input type="checkbox"/> Don't know
h. Antibiotics?	_____ <input type="checkbox"/> Don't know
i. Acaricides	<input type="checkbox"/> Don't know
Any other drugs used during the last 12 months?	_____

44. What do you do to keep your chicken/birds healthy, so they don't get sick? <i>Do not read options!</i>	<input type="checkbox"/> Clean/disinfect <input type="checkbox"/> Use vet drugs (incl. vaccine) <input type="checkbox"/> Keep well fed <input type="checkbox"/> Special feed (incl. supplements) <input type="checkbox"/> Fencing <input type="checkbox"/> Avoid mixing with other herd/flock <input type="checkbox"/> Other: _____
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<p>45. When was the last time a chicken/bird was sick?</p>	<p> <input type="checkbox"/> <1 month ago <input type="checkbox"/> 1-6 months ago <input type="checkbox"/> 7-12 months ago <input type="checkbox"/> >12 months ago <input type="checkbox"/> Never been sick </p>
<p>46. What kind of disease was it? <i>(select most appropriate group based on clinical sign or disease name given)</i></p>	<p> <input type="checkbox"/> Respiratory <input type="checkbox"/> Digestive/intestinal tract <input type="checkbox"/> Reproductive <input type="checkbox"/> Sudden death <input type="checkbox"/> Skin disease/wounds <input type="checkbox"/> External parasites <input type="checkbox"/> Neurological signs <input type="checkbox"/> Other _____ </p>
<p>47. What did you do when the chicken/birds were sick? <i>(do not read option, select most suitable answer)</i></p>	<p> <input type="checkbox"/> Use traditional medicine <input type="checkbox"/> Use medicine from the veterinary drug store (self-bought) <input type="checkbox"/> Consult traditional healer <input type="checkbox"/> Consults community animal health worker <input type="checkbox"/> Consult official veterinarian <input type="checkbox"/> Consult private veterinarian <input type="checkbox"/> Vet applied/left drugs <input type="checkbox"/> Other: _____ </p>
<p>48. Who did you turn to for help with diagnosis and treatment?</p>	<p> <input type="checkbox"/> No-one <input type="checkbox"/> Private veterinarian <input type="checkbox"/> Government veterinarian <input type="checkbox"/> Pharmacist/drug store <input type="checkbox"/> Other animal health service provider (p.e. Community animal health worker) <input type="checkbox"/> Neighbour/friend <input type="checkbox"/> Other: _____ </p>
<p>49. Do you keep records of treatments administered?</p>	<p> <input type="checkbox"/> Yes <input type="checkbox"/> No </p>
<p>50. What did you do with the eggs of the sick chicken/bird during and a few days after treatment?</p>	<p> <input type="checkbox"/> Used it normally (consume or sell) <input type="checkbox"/> Mixed it with milk from other cows <input type="checkbox"/> Threw it away </p>
<p>51. What did you do if a sick chicken/ bird did not improve after treatment or died a few days after treatment?</p>	<p> <input type="checkbox"/> Used it normally (consume or sell) <input type="checkbox"/> Buried the dead animal <input type="checkbox"/> Burnt the dead animal <input type="checkbox"/> Threw it away </p>

Animal specific section – pigs

52. Let's talk about your pigs	Write number
a. How many sows aged over 18 months and have given birth do you have?	_____
b. Boars aged over 1 year do you have?	_____
c. Growers/fatteners over 3 months- 1 year do you have?	_____
d. Piglets (<3 months) do you have?	_____

53. How are you keeping the pigs?	<input type="checkbox"/> 1= free-range <input type="checkbox"/> 2= tethered <input type="checkbox"/> 3= housed
54. What do you do with the manure from the pigs?	<input type="checkbox"/> Use as fertilizer <input type="checkbox"/> Use as fuel (incl. biogas) <input type="checkbox"/> Sell it (or trade it) <input type="checkbox"/> Give it away <input type="checkbox"/> Leave it where dropped Other: _____

55. What feed do you use for the pigs?	
a. Do you use grain or crop residues?	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Do you use household waste from your home or from somewhere else?	<input type="checkbox"/> Yes <input type="checkbox"/> No
c. Do you use commercial pre-mixed feed?	<input type="checkbox"/> Yes <input type="checkbox"/> No

56. From the drugs shown how many times have you used them in pigs in the last 4 weeks. <i>Alternatively ask to see packaging of commonly used drugs and classify according to list below.</i> For drugs used, please indicate the reason for use: multiple options for each drug possible Preparatory work: provide photographs of common veterinary drugs for each of the drug class or provide a box/basket with commonly used drugs, mark drugs or picture of drugs with 'drug class number' as used in drop-down menu					
Drug	Number of times used	Prevent disease	Treat sick animal	Fattening	Other
1 Vaccines					
2 Anthelmintics (Albendazol, etc.)					
3 Acaricides (ectoparasites)					
4 Tetracyclines					

5 Sulphonamides					
6 Penicillin (and combinations with Penicillin)					
7 Fluoroquinolones					
8 Macrolides					
9 Aminoglycosides					
10 Other antibiotics (specify)					
11 Vitamins/Iron supplements/mineral supplements					
12 Other drugs (specify)					
13 Drugs intended for human consumption					

<p>57. For the two most commonly used drugs Q56 answer the following question (Max 2 drugs) –Drug option 1 <i>Question 56 needs to be asked twice (for 2 drugs), add field for 'drug' ID, can be number of drug class above</i></p>	
<p>a. Who administered the drug the last time you used it?</p>	<p><input type="checkbox"/> I myself <input type="checkbox"/> Veterinarian <input type="checkbox"/> Other: _____</p>
<p>b. Which pigs were given the drug the last time you used it?</p>	<p><input type="checkbox"/> All animals <input type="checkbox"/> All animals of a certain age <input type="checkbox"/> Sick animals <input type="checkbox"/> Animals that should be sold <input type="checkbox"/> Animals that was just bought</p>
<p>c. Where did you get the drug from? <i>Enumerator to probe if veterinary drug store/Agrovet/ Human Pharmacy/from market for the specific name of the store to be used later while collecting veterinary drug samples</i></p>	<p><input type="checkbox"/> From veterinary drug store <input type="checkbox"/> From human pharmacy <input type="checkbox"/> From the vet <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> From the market <input type="checkbox"/> From traders passing by <input type="checkbox"/> From friends/neighbours/family <input type="checkbox"/> Other:.....</p>
<p>d. How did you know how to use the drug?</p>	<p><input type="checkbox"/> My own knowledge <input type="checkbox"/> Advice from veterinarian <input type="checkbox"/> Advice from other animal health service provider <input type="checkbox"/> Advice from pharmacist/drug store <input type="checkbox"/> Advice from neighbour/friend <input type="checkbox"/> Advice from package/label of the drug <input type="checkbox"/> Advice from other: _____</p>
<p>e. Was the drug treatment successful?</p>	<p><input type="checkbox"/> Yes, completely <input type="checkbox"/> Yes, partly <input type="checkbox"/> No</p>

<p>58. For the two most commonly used drugs Q56 answer the following question (Max 2 drugs) –Drug option 2 <i>Question 57 needs to be asked twice (for 2 drugs), add field for 'drug' ID, can be number of drug class above</i></p>
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a. Who administered the drug the last time you used it?	<input type="checkbox"/> I myself <input type="checkbox"/> Veterinarian <input type="checkbox"/> Other: _____
b. Which pigs were given the drug the last time you used it?	<input type="checkbox"/> All animals <input type="checkbox"/> All animals of a certain age <input type="checkbox"/> Sick animals <input type="checkbox"/> Animals that should be sold <input type="checkbox"/> Animals that was just bought
c. Where did you get the drug from? <i>Enumerator to probe if veterinary drug store/Agrovet/ Human Pharmacy/from market for the specific name of the store to be used later while collecting veterinary drug samples</i>	<input type="checkbox"/> From veterinary drug store <input type="checkbox"/> From human pharmacy <input type="checkbox"/> From the vet <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> From the market <input type="checkbox"/> From traders passing by <input type="checkbox"/> From friends/neighbours/family <input type="checkbox"/> Other:.....
d. How did you know how to use the drug?	<input type="checkbox"/> My own knowledge <input type="checkbox"/> Advice from veterinarian <input type="checkbox"/> Advice From other animal health service provider <input type="checkbox"/> Advice from pharmacist/drug store <input type="checkbox"/> Advice from neighbour/friend <input type="checkbox"/> Advice from package/label of the drug <input type="checkbox"/> Advice from other: _____
e. Was the drug treatment successful?	<input type="checkbox"/> Yes, completely <input type="checkbox"/> Yes, partly <input type="checkbox"/> No
f. Where do you normally keep the drug (s) bought?	<input type="checkbox"/> In a cabinet <input type="checkbox"/> In a shelf <input type="checkbox"/> In the animal house <input type="checkbox"/> Other: _____

59. How much did you spend on veterinary drugs for pigs in the last 4 weeks?	
In total (in local currency)	
Provide split of total if possible	
a. Vitamins?	_____ <input type="checkbox"/> Don't know
b. Vaccines?	_____ <input type="checkbox"/> Don't know
c. Dewormer?	_____ <input type="checkbox"/> Don't know
d. Antibiotics?	_____ <input type="checkbox"/> Don't know

e. Acaricides	_____ <input type="checkbox"/> Don't know
f. Any other drugs used during the last 12 months?	

60. What do you do to keep your pigs healthy, so they don't get sick? <i>Do not read options!</i>	<input type="checkbox"/> Clean/disinfect <input type="checkbox"/> Vet drugs (incl. vaccine) <input type="checkbox"/> Keep well fed <input type="checkbox"/> Special feed (incl. supplements) <input type="checkbox"/> Fencing <input type="checkbox"/> Avoid mixing with other herd/flock <input type="checkbox"/> Other: _____
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61. When was the last time a pig was sick?	<input type="checkbox"/> <1 month ago <input type="checkbox"/> 1-6 months ago <input type="checkbox"/> 7-12 months ago <input type="checkbox"/> >12 months ago <input type="checkbox"/> Never been sick
62. What kind of disease was it? <i>(select most appropriate group based on clinical sign or disease name given)</i>	<input type="checkbox"/> Respiratory <input type="checkbox"/> Digestive/intestinal tract <input type="checkbox"/> Reproductive <input type="checkbox"/> Mastitis <input type="checkbox"/> Sudden death <input type="checkbox"/> Skin disease/wounds <input type="checkbox"/> External parasites <input type="checkbox"/> Neurological signs <input type="checkbox"/> Other: _____
63. What did you do when the pigs were sick? <i>(do not read option, select most suitable answer)</i>	<input type="checkbox"/> Use traditional medicine <input type="checkbox"/> Use medicine from the veterinary drug store (self-bought) <input type="checkbox"/> Consult traditional healer <input type="checkbox"/> Consults Other animal health service provider (p.e. Community animal health worker) <input type="checkbox"/> Consult official veterinarian <input type="checkbox"/> Consult private veterinarian <input type="checkbox"/> Vet applied/left drugs <input type="checkbox"/> Other: _____
64. Who did you turn to for help with diagnosis and treatment?	<input type="checkbox"/> No-one <input type="checkbox"/> Private veterinarian <input type="checkbox"/> Government veterinarian <input type="checkbox"/> Pharmacist/drug store <input type="checkbox"/> Other animal health service provider (p.e. Community animal health worker) <input type="checkbox"/> Neighbour/friend <input type="checkbox"/> Other: _____

65. Do you keep records of treatments administered?	<input type="checkbox"/> Yes <input type="checkbox"/> No
66. What did you do if a sick died a few days after treatment?	<input type="checkbox"/> Used it normally (consume or sell) <input type="checkbox"/> Buried the dead animal <input type="checkbox"/> Burnt the dead animal <input type="checkbox"/> Threw it away

Animal specific section – small ruminants (include in herd composition question on sheep/goats)

67. Let's talk about your Sheep and Goats	<i>Write number</i>
a. How many rams (male sheep) do you have above the age of 1 year?	_____
b. How many ewes (female sheep) above the age of 1 year?	_____
c. How many bucks (male goat) above the age of 1 years?	_____
d. How many does (female goat) above the age of 1 year?	_____
e. Young (below 1 year) sheep	_____
f. Young (below 1 year) goats	_____
68. Are your sheep for meat or wool or hair?	<input type="checkbox"/> Meat <input type="checkbox"/> Wool <input type="checkbox"/> Hair <input type="checkbox"/> Meat and Wool <input type="checkbox"/> Meat and Hair
69. Are your goats for meat or dairy or hair?	<input type="checkbox"/> Dairy <input type="checkbox"/> Both dairy and Meat <input type="checkbox"/> Meat <input type="checkbox"/> Hair <input type="checkbox"/> Other

70. How are you keeping the sheep and goats?	<input type="checkbox"/> Zero-grazing <input type="checkbox"/> Fenced grazing <input type="checkbox"/> Tethered grazing <input type="checkbox"/> Pastoral grazing
71. Do the sheep and goats stay at farm or leave the farm for communal grazing?	<input type="checkbox"/> Stay at farm <input type="checkbox"/> Communal grazing

72. What do you do with the manure from the Sheep and goats?	<input type="checkbox"/> Use as fertilizer <input type="checkbox"/> Use as fuel (incl. biogas) <input type="checkbox"/> Sell it (or trade it) <input type="checkbox"/> Give it away <input type="checkbox"/> Leave it where dropped Other: _____
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73. What feed do you use for the sheep and goats?	
a. Do you use grain or crop residues?	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Do you use household waste from your home or from somewhere else?	<input type="checkbox"/> Yes <input type="checkbox"/> No
c. Do you use commercial pre-mixed feed?	<input type="checkbox"/> Yes <input type="checkbox"/> No
d. Do you use hay or other commercial forages	<input type="checkbox"/> Yes <input type="checkbox"/> No

74. From the drugs shown how many times have you used them in sheep and goats in the last 4 weeks. <i>Alternatively ask to see packaging of commonly used drugs and classify according to list below.</i> For drugs used, please indicate the reason for use: multiple options for each drug possible Preparatory work: provide photographs of common veterinary drugs for each of the drug class or provide a box/basket with commonly used drugs, mark drugs or picture of drugs with 'drug class number' as used in drop-down menu					
Drug	Number of times used	Prevent disease	Treat sick animal	Fattening	Other
1 Vaccines					
2 Anthelmintics (Albendazol, etc.)					
3 Acaricides (ectoparasites)					
4 Tetracyclines					
5 Sulphonamides					
6 Penicillin (and combinations with Penicillin)					
7 Fluoroquinolones					
8 Macrolides					
9 Aminoglycosides					
10 Other antibiotics (specify)					
11 Vitamins/Iron supplements					
12 Other drugs (specify)					
13 Drugs intended for human consumption					

75. For the two most commonly used drugs in Q74 answer the following questions: (Max 2 Drugs) Option 1 <i>Question 75 needs to be asked twice (for 2 drugs), add field for 'drug' ID, ca be number of drug class above</i>	
a. Who administered the drug the last time you used it?	<input type="checkbox"/> I myself <input type="checkbox"/> Veterinarian <input type="checkbox"/> Other: _____
b. Which sheep and goats were given the drug the last time you used it?	<input type="checkbox"/> All animals <input type="checkbox"/> All animals of a certain age <input type="checkbox"/> Sick animals <input type="checkbox"/> Animals that should be sold <input type="checkbox"/> Animals that was just bought
c. Where did you get the drug from? <i>Enumerator to probe if veterinary drug store/Agrovet/ Human Pharmacy/from market for the specific name of the store to be used later while collecting veterinary drug samples</i>	<input type="checkbox"/> From veterinary drug store <input type="checkbox"/> From human pharmacy <input type="checkbox"/> From the vet <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> From the market <input type="checkbox"/> From traders passing by <input type="checkbox"/> From friends/neighbours/family <input type="checkbox"/> Other:.....
d. How did you know how to use the drug?	<input type="checkbox"/> My own knowledge <input type="checkbox"/> Advice from veterinarian <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> Advice from pharmacist/drug store <input type="checkbox"/> Advice from neighbour/friend <input type="checkbox"/> Advice from package/label of the drug <input type="checkbox"/> Advice from other: _____
e. Was the drug treatment successful?	<input type="checkbox"/> Yes, completely <input type="checkbox"/> Yes, partly <input type="checkbox"/> No
f. Where do you normally keep the drug (s) bought?	<input type="checkbox"/> In a cabinet <input type="checkbox"/> In a shelf <input type="checkbox"/> In the animal house <input type="checkbox"/> Other: _____

76. For the two most commonly used drugs in Q74 answer the following questions: (Max 2 Drugs) Option 2 <i>Question 75 needs to be asked twice (for 2 drugs), add field for 'drug' ID, ca be number of drug class above</i>	
g. Who administered the drug the last time you used it?	<input type="checkbox"/> I myself <input type="checkbox"/> Veterinarian <input type="checkbox"/> Other: _____
h. Which sheep and goats were given the drug the last time you used it?	<input type="checkbox"/> All animals <input type="checkbox"/> All animals of a certain age <input type="checkbox"/> Sick animals <input type="checkbox"/> Animals that should be sold <input type="checkbox"/> Animals that was just bought

<p>i. Where did you get the drug from? <i>Enumerator to probe if veterinary drug store/Agrovet/ Human Pharmacy/from market for the specific name of the store to be used later while collecting veterinary drug samples</i></p>	<p> <input type="checkbox"/> From veterinary drug store <input type="checkbox"/> From human pharmacy <input type="checkbox"/> From the vet <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> From the market <input type="checkbox"/> From traders passing by <input type="checkbox"/> From friends/neighbours/family <input type="checkbox"/> Other:..... </p>
<p>j. How did you know how to use the drug?</p>	<p> <input type="checkbox"/> My own knowledge <input type="checkbox"/> Advice from veterinarian <input type="checkbox"/> Advice from other animal health service provider <input type="checkbox"/> <input type="checkbox"/> Advice from pharmacist/drug store <input type="checkbox"/> Advice from neighbour/friend <input type="checkbox"/> Advice from package/label of the drug <input type="checkbox"/> Advice from other: _____ </p>
<p>k. Was the drug treatment successful?</p>	<p> <input type="checkbox"/> Yes, completely <input type="checkbox"/> Yes, partly <input type="checkbox"/> No </p>
<p>l. Where do you normally keep the drug (s) bought?</p>	<p> <input type="checkbox"/> In a cabinet <input type="checkbox"/> In a shelf <input type="checkbox"/> In the animal house <input type="checkbox"/> Other: _____ </p>

77. How much did you spend on veterinary drugs for cows in the last 4 weeks?	
In total (in local currency)	
Provide split of total if possible	
a. Vitamins?	_____ <input type="checkbox"/> Don't know
b. Vaccines?	_____ <input type="checkbox"/> Don't know
c. Dewormer?	_____ <input type="checkbox"/> Don't know
d. Antibiotics?	_____ <input type="checkbox"/> Don't know
e. Acaracides	<input type="checkbox"/> Don't know
f. Any other drugs used during the last 12 months?	_____

<p>78. What do you do to keep your sheep and goats healthy, so they don't get sick? <i>Do not read options!</i></p>	<p> <input type="checkbox"/> Clean/disinfect <input type="checkbox"/> Vet drugs (incl. vaccine) <input type="checkbox"/> Keep well fed <input type="checkbox"/> Special feed (incl. supplements) <input type="checkbox"/> Fencing <input type="checkbox"/> Avoid mixing with other herd/flock <input type="checkbox"/> Other: _____ </p>
<p>79. When was the last time a sheep or goat got sick?</p>	<p> <input type="checkbox"/> <1 month ago <input type="checkbox"/> 1-6 months ago <input type="checkbox"/> 7-12 months ago <input type="checkbox"/> >12 months ago <input type="checkbox"/> Never been sick </p>
<p>80. What kind of disease was it? <i>(select most appropriate group based on clinical sign or disease name given)</i></p>	<p> <input type="checkbox"/> Respiratory <input type="checkbox"/> Digestive/intestinal tract <input type="checkbox"/> Reproductive <input type="checkbox"/> Mastitis <input type="checkbox"/> Sudden death <input type="checkbox"/> Skin disease/wounds <input type="checkbox"/> External parasites <input type="checkbox"/> Neurological signs <input type="checkbox"/> Other: _____ </p>
<p>81. What did you do when the sheep and goats were sick? <i>(do not read option, select most suitable answer)</i></p>	<p> <input type="checkbox"/> Use traditional medicine <input type="checkbox"/> Use medicine from the veterinary drug store (self-bought) <input type="checkbox"/> Consult traditional healer <input type="checkbox"/> Consults community animal health worker <input type="checkbox"/> Consult official veterinarian <input type="checkbox"/> Consult private veterinarian <input type="checkbox"/> Vet applied/left drugs <input type="checkbox"/> Other: _____ </p>
<p>82. Who did you turn to for help with diagnosis and treatment?</p>	<p> <input type="checkbox"/> No-one <input type="checkbox"/> Private veterinarian <input type="checkbox"/> Government veterinarian <input type="checkbox"/> Pharmacist/drug store <input type="checkbox"/> Community animal health worker <input type="checkbox"/> Neighbour/friend <input type="checkbox"/> Other: _____ </p>
<p>83. Do you keep records of treatments administered?</p>	<p> <input type="checkbox"/> Yes <input type="checkbox"/> No </p>

<p>84. What did you do with the milk of the sick animals during and a few days after treatment? <i>For those with dairy goats</i></p>	<p><input type="checkbox"/> Used it normally (consume or sell) <input type="checkbox"/> Mixed it with milk from other goats <input type="checkbox"/> Feed it to other animals e.g dogs, pigs <input type="checkbox"/> Threw it away</p>
<p>85. What did you do if a sick sheep or goat died a few days after treatment?</p>	<p><input type="checkbox"/> Used it normally (consume or sell) <input type="checkbox"/> Buried the dead animal <input type="checkbox"/> Burnt the dead animal <input type="checkbox"/> Threw it away</p>

Animal specific section – camels

86. Let's talk about your camels	<i>Write number</i>
a. How many bulls above the age of 3 years?	_____
b. How many cows above the age of 3 years?	_____
c. Calves	_____
87. Are your camels for meat or milk cows?	<input type="checkbox"/> Milk <input type="checkbox"/> Both Milk and Meat <input type="checkbox"/> Meat <input type="checkbox"/> Other

88. How are you keeping the camels?	<input type="checkbox"/> Zero-grazing <input type="checkbox"/> Fenced grazing <input type="checkbox"/> Tethered grazing <input type="checkbox"/> Pastoral grazing
89. Do the camels stay at farm or leave the farm for communal grazing?	<input type="checkbox"/> Stay at farm <input type="checkbox"/> Communal grazing
90. What do you do with the manure from the camels?	<input type="checkbox"/> Use as fertilizer <input type="checkbox"/> Use as fuel (incl. biogas) <input type="checkbox"/> Sell it (or trade it) <input type="checkbox"/> Give it away <input type="checkbox"/> Leave it where dropped Other: _____

91. What feed do you use for the camels?	
a. Do you use grain or crop residues?	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Do you use household waste from your home or from somewhere else?	<input type="checkbox"/> Yes <input type="checkbox"/> No

c. Do you use commercial pre-mixed feed?	<input type="checkbox"/> Yes <input type="checkbox"/> No
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92. From the drugs shown how many times have you used them in camels in the last 4 weeks.
Alternatively ask to see packaging of commonly used drugs and classify according to list below.

For drugs used, please indicate the reason for use: multiple options for each drug possible

Preparatory work: provide photographs of common veterinary drugs for each of the drug class or provide a box/basket with commonly used drugs, mark drugs or picture of drugs with 'drug class number' as used in drop-down menu

Drug	Number of times used	Prevent disease	Treat sick animal	Fattening	Other
1 Vaccines					
2 Anthelmintics (Albendazol, etc.)					
3 Acaricides (ectoparasites)					
4 Tetracyclines					
5 Sulphonamides					
6 Penicillin (and combinations with Penicillin)					
7 Fluoroquinolones					
8 Macrolides					
9 Aminoglycosides					
10 Other antibiotics (specify)					
11 Vitamins/Iron supplements					
12 Other drugs (specify)					
13 Drugs intended for human consumption					

93. For the two most commonly used drugs Q92 answer the following question (Max 2 Drugs) – Option 1
Question 93 needs to be asked twice (for 2 drugs), add field for 'drug' ID, can be number of drug class above

a. Who administered the drug the last time you used it?	<input type="checkbox"/> I myself <input type="checkbox"/> Veterinarian <input type="checkbox"/> Other: _____
b. Which camels were given the drug the last time you used it?	<input type="checkbox"/> All animals <input type="checkbox"/> All animals of a certain age <input type="checkbox"/> Sick animals <input type="checkbox"/> Animals that should be sold <input type="checkbox"/> Animals that was just bought

c. Where did you get the drug from?	<input type="checkbox"/> From veterinary drug store <input type="checkbox"/> From human pharmacy <input type="checkbox"/> From the vet <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> From the market <input type="checkbox"/> From traders passing by <input type="checkbox"/> From friends/neighbours/family <input type="checkbox"/> Other:.....
d. How did you know how to use the drug?	<input type="checkbox"/> My own knowledge <input type="checkbox"/> Advice from veterinarian <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> Advice from pharmacist/drug store <input type="checkbox"/> Advice from neighbour/friend <input type="checkbox"/> Advice from package/label of the drug <input type="checkbox"/> Advice from other: _____
e. Was the drug treatment successful?	<input type="checkbox"/> Yes, completely <input type="checkbox"/> Yes, partly <input type="checkbox"/> No
f. Where do you normally keep the drug (s) bought?	<input type="checkbox"/> In a cabinet <input type="checkbox"/> In a shelf <input type="checkbox"/> In the animal house <input type="checkbox"/> Other: _____

<p>94. For the two most commonly used drugs Q93 answer the following question (Max 2 Drugs) – Option 2 <i>Question 94 needs to be asked twice (for 2 drugs), add field for 'drug' ID, can be number of drug class above</i></p>	
a. Who administered the drug the last time you used it?	<input type="checkbox"/> I myself <input type="checkbox"/> Veterinarian <input type="checkbox"/> Other: _____
b. Which camels were given the drug the last time you used it?	<input type="checkbox"/> All animals <input type="checkbox"/> All animals of a certain age <input type="checkbox"/> Sick animals <input type="checkbox"/> Animals that should be sold <input type="checkbox"/> Animals that was just bought
c. Where did you get the drug from?	<input type="checkbox"/> From veterinary drug store <input type="checkbox"/> From human pharmacy <input type="checkbox"/> From the vet <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> From the market <input type="checkbox"/> From traders passing by <input type="checkbox"/> From friends/neighbours/family <input type="checkbox"/> Other:.....

d. How did you know how to use the drug?	<input type="checkbox"/> My own knowledge <input type="checkbox"/> Advice from veterinarian <input type="checkbox"/> Advice from other animal health service provider <input type="checkbox"/> Advice from pharmacist/drug store <input type="checkbox"/> Advice from neighbour/friend <input type="checkbox"/> Advice from package/label of the drug <input type="checkbox"/> Advice from other: _____
e. Was the drug treatment successful?	<input type="checkbox"/> Yes, completely <input type="checkbox"/> Yes, partly <input type="checkbox"/> No
f. Where do you normally keep the drug (s) bought?	<input type="checkbox"/> In a cabinet <input type="checkbox"/> In a shelf <input type="checkbox"/> In the animal house <input type="checkbox"/> Other: _____

95. How much did you spend on veterinary drugs for Camels in the last 4 weeks?	
In total (in local currency)	
Provide split of total if possible	
a. Vitamins?	_____ <input type="checkbox"/> Don't know
b. Vaccines?	_____ <input type="checkbox"/> Don't know
c. Dewormer?	_____ <input type="checkbox"/> Don't know
d. Antibiotics?	_____ <input type="checkbox"/> Don't know
e. Acaricides	_____ <input type="checkbox"/> Don't know
f. Any other drugs used during the last 12 months?	

96. What do you do to keep your camels healthy, so they don't get sick? <i>Do not read options!</i>	<input type="checkbox"/> Clean/disinfect <input type="checkbox"/> Vet drugs (incl. vaccine) <input type="checkbox"/> Keep well fed <input type="checkbox"/> Special feed (incl. supplements) <input type="checkbox"/> Fencing <input type="checkbox"/> Avoid mixing with other herd/flock <input type="checkbox"/> Other: _____
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97. When was the last time a camel was sick?	<input type="checkbox"/> <1 month ago <input type="checkbox"/> 1-6 months ago <input type="checkbox"/> 7-12 months ago <input type="checkbox"/> >12 months ago <input type="checkbox"/> Never been sick
98. What kind of disease was it? <i>(select most appropriate group based on clinical sign or disease name given)</i>	<input type="checkbox"/> Respiratory <input type="checkbox"/> Digestive/intestinal tract <input type="checkbox"/> Reproductive <input type="checkbox"/> Mastitis <input type="checkbox"/> Sudden death <input type="checkbox"/> Skin disease/wounds <input type="checkbox"/> External parasites <input type="checkbox"/> Neurological signs <input type="checkbox"/> Other _____
99. What did you do when the camels were sick? <i>(do not read option, select most suitable answer)</i>	<input type="checkbox"/> Use traditional medicine <input type="checkbox"/> Use medicine from the veterinary drug store (self-bought) <input type="checkbox"/> Consult traditional healer <input type="checkbox"/> Consults other animal health service provider (p.e. community animal health worker) <input type="checkbox"/> Consult official veterinarian <input type="checkbox"/> Consult private veterinarian <input type="checkbox"/> Vet applied/left drugs <input type="checkbox"/> Other: _____
100. Who did you turn to for help with diagnosis and treatment?	<input type="checkbox"/> No-one <input type="checkbox"/> Private veterinarian <input type="checkbox"/> Government veterinarian <input type="checkbox"/> Pharmacist/drug store <input type="checkbox"/> Other animal health service provider (p.e. community animal health worker) <input type="checkbox"/> Neighbour/friend <input type="checkbox"/> Other: _____
101. Do you keep records of treatments administered?	<input type="checkbox"/> Yes <input type="checkbox"/> No
102. What did you do with the milk of the sick animals during and a few days after treatment?	<input type="checkbox"/> Used it normally (consume or sell) <input type="checkbox"/> Mixed it with milk from other cows <input type="checkbox"/> Threw it away
103. What did you do if a sick camel died a few days after treatment?	<input type="checkbox"/> Used it normally (consume or sell) <input type="checkbox"/> Buried the dead animal <input type="checkbox"/> Burnt the dead animal <input type="checkbox"/> Threw it away

Animal specific section - Horses or donkeys

104.Let's talk about your Horses or Donkeys	<i>Write number</i>
a. How many stallions (Males) do you have above the age of 2 years?	_____
b. How many Mares/Jennies do you have above the age of 2 years?	_____
c. How many young ones below 2 years?	_____
105.What do you keep your horses and or donkeys for?	<input type="checkbox"/> Transportation <input type="checkbox"/> Meat <input type="checkbox"/> Racing/Companion <input type="checkbox"/> For Selling (Breeders)

106.How are you keeping the Horses and/or Donkeys?	<input type="checkbox"/> Zero-grazing <input type="checkbox"/> Fenced grazing <input type="checkbox"/> Tethered grazing <input type="checkbox"/> Pastoral grazing
107.Do the Horses and /or Donkeys stay at farm or leave the farm for communal grazing?	<input type="checkbox"/> Stay at farm <input type="checkbox"/> Communal grazing
108.What do you do with the manure from the horses and/or donkeys?	<input type="checkbox"/> Use as fertilizer <input type="checkbox"/> Use as fuel (incl. biogas) <input type="checkbox"/> Sell it (or trade it) <input type="checkbox"/> Give it away <input type="checkbox"/> Leave it where dropped Other: _____

109.What feed do you use for the horses and /or donkeys?	
a. Do you use grain or crop residues?	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Do you use household waste from your home or from somewhere else?	<input type="checkbox"/> Yes <input type="checkbox"/> No
c. Do you use commercial pre-mixed feed?	<input type="checkbox"/> Yes <input type="checkbox"/> No
d. Do you use commercial hay / forages	<input type="checkbox"/> Yes <input type="checkbox"/> No

<p>110.From the drugs shown how many times have you used them in horses and /or donkeys in the last 4 weeks. Alternatively ask to see packaging of commonly used drugs and classify according to list below.</p> <p>For drugs used, please indicate the reason for use: multiple options for each drug possible</p> <p>Preparatory work: provide photographs of common veterinary drugs for each of the drug class or provide a box/basket with commonly used drugs, mark drugs or picture of drugs with 'drug class number' as used in drop-down menu</p>					
Drug	Number of times used	Prevent disease	Treat sick animal	Fattening	Other
1 Vaccines					
2 Anthelmintics (Albendazol, etc.)					
3 Acaricides (ectoparasites)					
4 Tetracyclines					
5 Sulphonamides					
6 Penicillin (and combinations with Penicillin)					
7 Fluoroquinolones					
8 Macrolides					
9 Aminoglycosides					
10 Other antibiotics (specify)					
11 Vitamins/Iron supplements					
12 Other drugs (specify)					
13 Drugs intended for human consumption					

111.For the two most commonly used drugs Q110 answer the following question (Max 2 drugs) – Option 1 Question 111 needs to be asked twice (for 2 drugs), add field for 'drug' ID, can be number of drug class above	
a. Who administered the drug the last time you used it?	<input type="checkbox"/> I myself <input type="checkbox"/> Veterinarian <input type="checkbox"/> Other: _____

b. Which cows were given the drug the last time you used it?	<input type="checkbox"/> All animals <input type="checkbox"/> All animals of a certain age <input type="checkbox"/> Sick animals <input type="checkbox"/> Animals that should be sold <input type="checkbox"/> Animals that was just bought
c. Where did you get the drug from? <i>Enumerator to probe if veterinary drug store/Agrovet/ Human Pharmacy/from market for the specific name of the store to be used later while collecting veterinary drug samples</i>	<input type="checkbox"/> From veterinary drug store/Agrovet <input type="checkbox"/> From human pharmacy <input type="checkbox"/> From the vet <input type="checkbox"/> From other animal health service provider <input type="checkbox"/> From the market <input type="checkbox"/> From traders passing by <input type="checkbox"/> From friends/neighbours/family <input type="checkbox"/> Other:.....
d. How did you know how to use the drug?	<input type="checkbox"/> My own knowledge <input type="checkbox"/> Advice from veterinarian <input type="checkbox"/> Advice from other animal health service provider <input type="checkbox"/> Advice from pharmacist/drug store <input type="checkbox"/> Advice from neighbour/friend <input type="checkbox"/> Advice from package/label of the drug <input type="checkbox"/> Advice from other: _____
e. Was the drug treatment successful?	<input type="checkbox"/> Yes, completely <input type="checkbox"/> Yes, partly <input type="checkbox"/> No
f. Where do you normally keep the drug (s) bought?	<input type="checkbox"/> In a cabinet <input type="checkbox"/> In a shelf <input type="checkbox"/> In the animal house <input type="checkbox"/> Other: _____

112.How much did you spend on veterinary drugs for horses and or donkeys in the last 4 weeks?	
In total (in local currency)	
Provide split of total if possible	
a. Vitamins?	_____ <input type="checkbox"/> Don't know
b. Vaccines?	_____ <input type="checkbox"/> Don't know
c. Dewormer?	_____ <input type="checkbox"/> Don't know

d. Antibiotics?	_____ <input type="checkbox"/> Don't know
e. Acaracides	_____ <input type="checkbox"/> Don't know
f. Any other drugs used during the last 12 months?	

113.What do you do to keep your horses and /or donkeys healthy, so they don't get sick? <i>Do not read options!</i>	<input type="checkbox"/> Clean/disinfect <input type="checkbox"/> Vet drugs (incl. vaccine) <input type="checkbox"/> Keep well fed <input type="checkbox"/> Special feed (incl. supplements) <input type="checkbox"/> Fencing <input type="checkbox"/> Avoid mixing with other herd/flock <input type="checkbox"/> Other: _____
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114.When the last time a horse and / or donkey was sick?	<input type="checkbox"/> <1 month ago <input type="checkbox"/> 1-6 months ago <input type="checkbox"/> 7-12 months ago <input type="checkbox"/> >12 months ago <input type="checkbox"/> Never been sick
115.What kind of disease was it? <i>(select most appropriate group based on clinical sign or disease name given)</i>	<input type="checkbox"/> Respiratory <input type="checkbox"/> Digestive/intestinal tract <input type="checkbox"/> Reproductive <input type="checkbox"/> Mastitis <input type="checkbox"/> Sudden death <input type="checkbox"/> Skin disease/wounds <input type="checkbox"/> External parasites <input type="checkbox"/> Neurological signs <input type="checkbox"/> Other: _____
116.What did you do when the horse and or donkey were sick? <i>(do not read option, select most suitable answer)</i>	<input type="checkbox"/> Use traditional medicine <input type="checkbox"/> Use medicine from the veterinary drug store (self-bought) <input type="checkbox"/> Consult traditional healer <input type="checkbox"/> Consults community animal health worker <input type="checkbox"/> Consult official veterinarian <input type="checkbox"/> Consult private veterinarian <input type="checkbox"/> Vet applied/left drugs <input type="checkbox"/> Other: _____
117.Who did you turn to for help with diagnosis and treatment?	<input type="checkbox"/> No-one <input type="checkbox"/> Private veterinarian <input type="checkbox"/> Government veterinarian <input type="checkbox"/> Pharmacist/drug store <input type="checkbox"/> Other animal health service provider <input type="checkbox"/> Neighbour/friend <input type="checkbox"/> Other: _____

118. Do you keep records of treatments administered?	<input type="checkbox"/> Yes <input type="checkbox"/> No
119. What did you do if a sick horse or donkey died a few days after treatment?	<input type="checkbox"/> Used it normally (consume or sell) <input type="checkbox"/> Buried the dead animal <input type="checkbox"/> Burnt the dead animal <input type="checkbox"/> Threw it away

Questions on farm

120. Are you the owner of the animals?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No
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121. What work are you involved in when it comes to the animals?	
a. Are you involved in the daily work of feeding and taking care of the animals?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No
b. Are you involved in selling animals or products from the animals such as milk or eggs?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No
c. Are you involved in treating or looking after the animals when sick?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No

122. Do you have employees or casual workers that are involved in working with the animals?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No
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123.a. Did you sell any milk during the last 12 months?	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Did you sell milk throughout the year, at certain months or occasionally?	<input type="checkbox"/> Throughout the year <input type="checkbox"/> Certain months/periods <input type="checkbox"/> Occasionally
c. Where did you sell the milk?	<input type="checkbox"/> To Neighbours <input type="checkbox"/> To the Cooperative <input type="checkbox"/> To Middle men <input type="checkbox"/> To others
124.a. Did you sell any eggs during the last 12 months?	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Did you sell eggs throughout the year, at certain months or occasionally?	<input type="checkbox"/> Throughout the year <input type="checkbox"/> Certain months/periods <input type="checkbox"/> Occasionally

c. Where did you sell the eggs?	<input type="checkbox"/> To Neighbours <input type="checkbox"/> To the market <input type="checkbox"/> To Middle men/ traders <input type="checkbox"/> To others
125.a. Did you sell any live animals during the last 12 months?	<input type="checkbox"/> Yes <input type="checkbox"/> No
d. Did you sell live animals throughout the year, at certain months or occasionally?	<input type="checkbox"/> Throughout the year <input type="checkbox"/> Certain months/periods <input type="checkbox"/> Occasionally
e. Where did you sell the live animals?	<input type="checkbox"/> To Neighbours <input type="checkbox"/> To the market <input type="checkbox"/> To Middle men/ traders <input type="checkbox"/> To others
126.How many times does the household consume eggs	<input type="checkbox"/> Everyday <input type="checkbox"/> Three times a week <input type="checkbox"/> Once a week <input type="checkbox"/> Once a month <input type="checkbox"/> Don't consume
126 b) Who in the household is given priority to consume eggs? Please rank the top 3 household members: babies/newborns, boys < 10y, girls <10y, teenage boys, teenage girls, household head male, household head female, grandparents	<i>Drop-down with options of HH members</i> Rank 1: Rank 2: Rank 3:
127.How many times does the household consume milk	<input type="checkbox"/> Everyday <input type="checkbox"/> Three times a week <input type="checkbox"/> Once a week <input type="checkbox"/> Once a month <input type="checkbox"/> Don't consume
127b) Who in the household is given priority to consume milk and dairy products? Please rank the top 3 household members: babies/newborns, boys < 10y, girls <10y, teenage boys, teenage girls, household head male, household head female, grandparents	<i>Drop-down with options of HH members</i> Rank 1: Rank 2: Rank 3:
128.How many times does the household consume meat	<input type="checkbox"/> Everyday <input type="checkbox"/> Three times a week <input type="checkbox"/> Once a week <input type="checkbox"/> Once a month <input type="checkbox"/> Don't consume
128b) Who in the household is given priority to consume meat and dairy products? Please rank the top 3 household members: babies/newborns, boys < 10y, girls <10y, teenage boys, teenage girls, household head male, household head female, grandparents	<i>Drop-down with options of HH members</i> Rank 1: Rank 2: Rank 3:

129.Does your household get income (s) from any of the following?	
a. Incomes from crop farming?	<input type="checkbox"/> Yes <input type="checkbox"/> No
b. Incomes from animal farming?	<input type="checkbox"/> Yes <input type="checkbox"/> No

c. Incomes from own business other than farming?	<input type="checkbox"/> Yes <input type="checkbox"/> No
d. Salary from employment	<input type="checkbox"/> Yes <input type="checkbox"/> No
e. Salary from casual work	<input type="checkbox"/> Yes <input type="checkbox"/> No
f. Income from any other source (specify)	<input type="checkbox"/> Yes <input type="checkbox"/> No
g. Other (specify) –may include brewing, mining, sale of forest products- wood , firewood etc	

130.How big part of your household's income comes from the animals?	<input type="checkbox"/> 1 All of the income <input type="checkbox"/> 2 Major part of the income <input type="checkbox"/> 3 Half of the income <input type="checkbox"/> 4 Minor part of the income <input type="checkbox"/> 5 None of the income
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131.Let's talk about animal health services?	
a. Who is your primary provider of animal health service?	<input type="checkbox"/> 1 traditional healer <input type="checkbox"/> 2 Community animal health worker <input type="checkbox"/> 3 Private veterinarian (qualification unknown) <input type="checkbox"/> 4 Private veterinarian (qualified) <input type="checkbox"/> 5 Official/government veterinarian <input type="checkbox"/> 6 other, specify.....
b. Did you call for professional help, for example a qualified veterinarian in the last 2 months?	<input type="checkbox"/> Yes <input type="checkbox"/> No
c. Did you use laboratory services, for example for testing blood samples from your animals in the last 12 months?	<input type="checkbox"/> Yes <input type="checkbox"/> No
d. Did you take part in any campaigns or programs about animal health in the last 12 months? That could for example be vaccination campaigns run by the government or information campaigns run by NGO.	<input type="checkbox"/> Yes <input type="checkbox"/> No
e. Have you reported any disease problems to any animal health service provider in the last 12 months?	<input type="checkbox"/> Yes <input type="checkbox"/> No

132.Who do you turn to normally for advice on drugs?	<input type="checkbox"/> No-one <input type="checkbox"/> Private veterinarian <input type="checkbox"/> Government veterinarian <input type="checkbox"/> Pharmacist/drug store <input type="checkbox"/> Other animal health service provider <input type="checkbox"/> Neighbour/friend <input type="checkbox"/> Other: _____
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133.Would you say vaccination can be used for any of the following...	
a. To cure sick animals?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
b. To prevent animals from being sick?	<input type="checkbox"/> Yes

	<input type="checkbox"/> No <input type="checkbox"/> Don't know
c. To make animals grow faster (fattening)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know

134. Would you say antibiotics can be used for any of the following...	
a. To cure sick animals?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
b. To prevent animals from being sick?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
c. To make animals grow faster (fattening)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know

135. Do you consume milk, from animals who were just treated with drugs	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No
136. If No to the above, for how many days should you not consume the milk of treated animals?days.
137. Do you consume eggs from chicken/ birds who were just treated with drugs?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No
138. If No to the above, for how many days should you not consume the eggs?days
139. Do you consume meat from animals who were just treated with drugs.	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 2 No
140. If No to the above, for how many days should you not consume the meat?days

141. If you hear two of your neighbors talk like this. Would you agree with neighbor A or neighbor B?	
a. A says: You should always dispose of expired drugs because they may have turned bad B says: Drugs are expensive and usually last longer than what the package says so you can still use them	<input type="checkbox"/> Agree with A <input type="checkbox"/> Agree with B <input type="checkbox"/> Don't know
b. A says: It is not reasonable to throw away milk from cows treated with antibiotics - the danger is surely exaggerated B says: You need to throw the milk away since it can be dangerous to consume it.	<input type="checkbox"/> Agree with A <input type="checkbox"/> Agree with B <input type="checkbox"/> Don't know
141 Medical waste disposal	
a. What do you do with expired drugs?	<input type="checkbox"/> Continue to use

	<input type="checkbox"/> Throw away drugs (e.g. in pit latrines or bushes) <input type="checkbox"/> Burn or bury <input type="checkbox"/> Give away to drug vendors to dispose for me <input type="checkbox"/> other, please specify.....
b.	
142 Farmers Training	
a. Have you ever attended any training for farmers on disease prevention and control	Yes/No
B What were you trained on? Multiple answers possible	<input type="checkbox"/> Detecting animal diseases] <input type="checkbox"/> Reporting animal diseases <input type="checkbox"/> Treating animal diseases <input type="checkbox"/> Use of veterinary drugs etc <input type="checkbox"/> Other -
C Who provided the trainings? (max 3 answers)	<input type="checkbox"/> Government /official vets <input type="checkbox"/> Private vets <input type="checkbox"/> Extension system <input type="checkbox"/> NGOs <input type="checkbox"/> Church organization <input type="checkbox"/> Farmer Cooperatives <input type="checkbox"/> Drug company <input type="checkbox"/> Pharmacy/ Agrovets owners <input type="checkbox"/> Others
D What do you remember from the training? <i>Open question</i>	
E What did you change after the training? <i>Open question</i>	

DEMOGRAPHICS

142.What is your age?	_____ (years old)
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143.What is your education level?	<input type="checkbox"/> 1 Never went to school <input type="checkbox"/> 2 Adult literacy <input type="checkbox"/> 3 Non-formal education for _____ years <input type="checkbox"/> 4 Primary school (P1-P7) (P8) <input type="checkbox"/> 5 Secondary school (S1-S6) <input type="checkbox"/> 6 Vocational training (specify) _____ <input type="checkbox"/> 7 University degree (undergraduate)
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144. Who is the household head? That is the one who makes important decisions about the household.	<input type="checkbox"/> 1 Myself <input type="checkbox"/> 2 My husband/wife <input type="checkbox"/> 2 Other person
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145. Do you sometimes use drugs intended for humans in animals?	<input type="checkbox"/> Yes <input type="checkbox"/> No
146. What is the reason for doing that?	
147. Do you sometimes use drugs intended for animals in humans?	<input type="checkbox"/> Yes <input type="checkbox"/> No
148. What is the reason for doing that?	