

Supplementary materials:

Table S1: List of all the variables studied to assess risk factors of Brucella-infection with their particulars and our decision on using it for multivariable analysis

Variables	Description of the variables	Sero- positive/ total (%)	Coefficient of unconditional association with Brucella sero-positivity	p-value of association	Missing value	Kept for multivariable model
Outcome						
ELISA results of Brucella-infection	Positive	58			13	
	Negative	306				
Identifiers						
Districts	Kamrup (large farms)	49/135 (18.9)	Ref.	<0.001	0	Yes
	Kamrup (small farms)	3/41(7.3)	-2.19			
	Golaghat	2/96(2.1)	-2.77			
	Baska	4/92(4.3)	-3.55			
Farm Characteristics (FC)						
Location of the farm in rural or urban areas	Rural CDB	20/161(12.4)	Ref.	0.16	0	Yes
	Urban CDB	38/203(18.7)	0.43			
Category of farms	Small (1-3 dairy animal),	8/223(3.6)	Ref.	<0.001	0	Yes
	Medium (4-10 dairy animals)	19/81(23.4)	2.19			
	Large (>10 dairy animals)	31/60(51.7)	3.58			
Dairy animals in contact with goat	Yes	9/106(8.5)	-1.19	0.03	0	Yes
	No	49/258(19.0)	Ref.			
Type of floor	Concrete	20/67(29.8)	Ref.	<0.001	0	Yes
	Earthen	9/202(4.4)	-2.42			
	Others	29/95(30.5)	0.10			
System of rearing	Fully stallfed	50/155(32.2)	2.48	<0.001	0	No
	Partly stallfed	8/209(3.8)	Ref.			
Dairy animal in contact with pig	Yes	2/14(14.3)	-0.13	0.86	0	No
	No	56/350(16.0)	Ref.			
Dairy animal in contact with dog	Yes	33/216(15.3)	-0.12	0.68	0	No
	No	25/148(16.9)	Ref.			
Dairy animal in contact with wild animal	Yes	25/159(15.7)	-0.03	0.92	0	No
	No	33/205(16.1)	Ref.			
Type of roof	Thatch	9/46(19.6)	0.19	0.49	77	No
	Corrugated asbestos	Tin/ 28/233(12.0)	0.12			

	Others	2/18(11.1)	Ref.			
Source of introduction	Known source	19/67(28.3)	0.17	0.80	285	No
	Unknown source	3/12(25.0)	Ref.			
Farm Management (FM)						
Adoption of AI	Yes	46/225(20.4)	1.16	0.02	0	Yes
	No	12/139(8.6)	Ref.			
Introduction of new animals	Introduced	22/79(27.8)	1.54	0.006	0	Yes
	Not introduced	36/285(12.6)	Ref.			
Movement of animal	Animal moved	9/213(4.2)	-2.67	<0.001	0	Yes
	Not moved	49/151(32.4)	Ref.			
Use of disinfectant in cleaning farms	Used disinfectant,	35/160(21.9)	1.06	0.02	0	Yes
	Not used disinfectant	23/204(11.3)	Ref.			
Quarantine of newly purchased animal	Yes	0/9	0	0	0	No
	No	58/355(16.3)				
Purchase of sick animal	Yes	4/18(22.2)	0.43	0.47	0	No
	No	54/346(15.6)	Ref.			
Purchase of weak but cheap animal	Yes	3/10(30.0)	0.84	0.26	0	No
	No	55/354(15.5)	Ref.			
Vaccination (against any disease) followed	Yes	46/150(30.7)	2.01	<0.001	0	No
	No	12/214(5.6)	Ref.			
Cleanliness of animal	Very clean	20/118(16.9)	Ref.	0.73	0	No
	Clean	38/244(15.6)	-0.10			
	Dirty	0/2	0			
Aborted material buried	Yes	28/70(40.0)	1.20	0.23	288	No
	No	1/6(16.7)	Ref.			
Producers Demographic (PD)						
Education of farmers	No education	17/66(25.7)	Ref.	0.14	0	Yes
	Class I-V	11/49(22.4)	-0.15			
	Class VI-X	18/149(12.1)	-1.16			
	Class XI and above	12/100(12.0)	-1.13			
Age of farmers	20-40 years	21/89(23.6)	Ref.	0.10	0	Yes
	41-60 years	26/191(13.6)	-1.15			
	60 years and above	11/84(13.1)	-1.15			
Training availed by farmers	Availed	15/50 (30.0)	1.52	0.02	0	Yes
	Not availed	43/314(13.7)	Ref.			
Interaction had with the veterinarians	Had interaction	55/297(18.5)	1.85	0.005	0	Yes
	No interaction	3/67(4.5)	Ref.			
Gender of farmer	Male	58/351(16.5)	0	0	0	No
	Female	0/13				

Cow Demographic (CD)						
Breed of animal	Non-descript indigenous	7/178(3.9)	Ref.	<0.001	13	Yes
	Improved/CB/pure	51/186(27.4)	2.66			
Age of animals	With Brucella sero-positive	6.83±0.33	0.12	0.03	13	Yes
	With Brucella sero-negative	6.09±0.13	Ref.			
No. of lactation	With Brucella sero-positive	3.24±0.23	0.23	0.009	0	No
	With Brucella sero-negative	2.64±0.09	Ref.			
Species of animal	Cattle	58/364	0	0	0	No
	Buffalo	0				