Supplementary material S1

Results of WTP-S model: The coefficients indicate the WTP estimates in KES (for example, respondents were willing to pay about 8 KES for artificial insemination services offered by the hub)

Attributes	Coefficients	SE
Price of AI (in '000 KES)[1]	-0.44***	0.12
Service offered by the hub	8.64***	2.21
Offered by private hub-affiliated providers	4.23***	1.45
No other additional service is offered	-3.06***	0.64
≥1 repeats at shared cost - by both farmer and AI provider	11.82***	1.46
Local semen	-30.35***	2.71
Sexed semen	5.76***	1.99
Check-off payment system	7.61***	1.92
Flexible payment (either cash or check-off)	5.82***	2.17
Constant: "opt-out" alternative	-7.37***	0.63
Standard deviations of random parameters and their standard errors:		
Service offered by the hub	23.57***	2.37
Offered by private hub-affiliated providers	0.67	2.14
No other additional service is offered	0.94	1.29
≥1 repeats at shared cost - by both farmer and AI provider	19.77***	2.01
Local semen	17.54***	2.63
Sexed semen	30.47***	2.56
Check-off payment system	8.24***	2.28
Flexible payment (either cash or check-off)	15.93***	2.42
Scale parameter:		
Tau	1.84***	0.16
Model fit:		
Log likelihood function	-1622.32	
Pseudo-R^2	0.35	
Observations (panel of 301 respondents)	1806	
Replications for simulated probabilities (Halton draws)	500	

[1] In preference space form

Supplementary material S2

Additional references

1. Lancaster K 1966. New approach to consumer theory. Journal of Political Economy 74, 132–157.

2. McFadden D 1974. Conditional logit analysis of qualitative choice behaviour. In Frontiers in Econometrics (ed P Zarembka), pp. 105–142. Academic Press, New York.

3. Manski C 1977. The structure of random utility models. Theory and Decision 8, 229–254.

4. Scarpa R, Ruto E, Kristjanson P, Radeny M, Drucker AG, Rege JEO 2003. Valuing indigenous cattle breeds in Kenya: an empirical comparison of stated and revealed preference value estimates. Ecological Economics 45, 409–426.

5. Ouma EA, Abdulai A, Drucker AG 2007. Measuring heterogeneous preferences for cattle traits among cattle-keeping households in East Africa. American Journal of Agricultural Economics 89, 1005–1019.

6. Omondi IA, Baltenweck I, Obare GA, Zander KK 2008. Economic valuation of sheep genetic resources: implications for sustainable utilization in the Kenyan semi-arid tropics. Tropical Animal Health and Production 40, 615–626.

7. Omondi I, Baltenweck I, Drucker A, Obare G, Zander KK 2008. Valuing goat genetic resources: a pro-poor growth strategy in the Kenyan semi-arid tropics. Tropical Animal Health and Production 40, 583–596.

8. Ruto E, Garrod G, Scarpa R 2008. Valuing animal genetic resources: a choice modeling application to indigenous cattle in Kenya. Agricultural Economics 38, 89–98.

9. Kassie GT, Abdulai A, Wollny C 2009. Valuing traits of indigenous cows in central Ethiopia. Journal of Agricultural Economics 60, 386–401.

10. Zander KK, Drucker AG 2008. Conserving what's important: using choice model scenarios to value local cattle breeds in East Africa. Ecological Economics 68, 34–45.

11. Madzimure J, Chimonyo M, Dzama K, Garnett ST, Zander KK 2015. Classical swine fever changes the way farmers value pigs in South Africa. Journal of Agricultural Economics 66, 812–831.

12. Tesfaye A, Brouwer R 2012. Testing participation constraints in contract design for sustainable soil conservation in Ethiopia. Ecological Economics 73, 168–178.

13. Vidogbèna F, Adégbidi AA, Tossou R, Assogba-Komlan F, Ngouajio M, Martin T, Simon S, Parrot L, Zander KK 2015. Control of vegetable pests in Benin - Farmers' preferences for eco-friendly nets as an alternative to insecticides. Journal of Environmental Management 147, 95–107.

14. Mekonnen A, Yesuf M, Carlsson F, Köhlin G 2010. Farmers' choice between public goods and agricultural extension packages in Ethiopia: a stated preference analysis. In Choice experiments in developing countries: implementation, challenges and policy implications (eds J Bennett, E Birol), pp. 189–204. Edward Elgar, Cheltenham.

15. Scarpa R, Thiene M, Train K 2008. Utility in willingness to pay space: a tool to address confounding random scale effects in destination choice to the Alps. American Journal of Agricultural Economics 90, 94–1010.

16. Hole AR, Kolstad JR 2012. Mixed logit estimation of willingness to pay distributions: a comparison of models in preference and WTP space using data from a health related choice experiment. Empirical Economics 42, 445–469.

17. Zanoli R, Scarpa R, Napolitano F, Piasentier E, Naspetti S, Bruschi V 2013. Organic label as an identifier of environmentally related quality: a consumer choice experiment on beef in Italy. Renewable Agriculture and Food Systems 28, 70–79.

18. Scarpa R, Rose JM 2008. Designs efficiency for nonmarket valuation with choice modelling: how to measure it, what to report and why. Australian Journal of Agricultural and Resource 52, 253–282.

19. Jones B, Goos P 2009. D-optimal design of split-split-plot experiments. Biometrika 96, 67–82.