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## Willingness to pay for assisted reproductive technologies by pastoral herd owners in Southern Rangelands of Kenya

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### Abstract

Uptake of Assisted Reproductive Technologies (ARTs) can widen and accelerate access to quality breeding stock under pastoral systems, but user participation without subsidy is uncertain when the herders have to meet the direct cost. Analyzing willingness to pay (WTP) for ARTs may provide insights into the potential uptake of ARTs when development agencies withdraw subsidies and private entrepreneurs take up the service delivery. This study estimated WTP for ARTs among 130 pastoral herd owners participating in the Sahiwal cattle breed upgrading program implemented in Transmara Sub County in the southern rangelands of Kenya. The average WTP was KES 3,643 (USD 33.4), equivalent to a 21.4% premium with reference to the base price (KES 3,000) (USD 27.5). 67% of the pastoral herd owners expressed WTP above the hypothesized market price, twice more than those expressing WTP below the hypothesized market price (33%). The first choice attributes influencing the WTP for ARTs were high milk yield (62%), high-value calves (37%), and high growth rates (1%). Gender was the only socioeconomic factor significantly ( $p < 0.005$ ) influencing WTP, with men expressing higher WTP than women (KES 3,870 (USD 35.5) versus KES 3,223 (USD 26.6)). The results indicate a high likelihood of pastoral herd owners continuing to access and use ARTs at their own cost, which provides opportunities for private sector participation in ARTs delivery and upscaling to increase access to superior Sahiwal genetic resources in pastoral herds. This will need to put in place policy interventions supportive of efficient ARTs delivery mechanisms.

**Keywords:** Assisted reproductive technologies, willingness to pay, pastoral herd owners, double bounded dichotomous choice, contingent valuation