

SOME INITIAL NOTES ON THE POTENTIAL NET RETURNS TO PASTORAL LAND USES¹

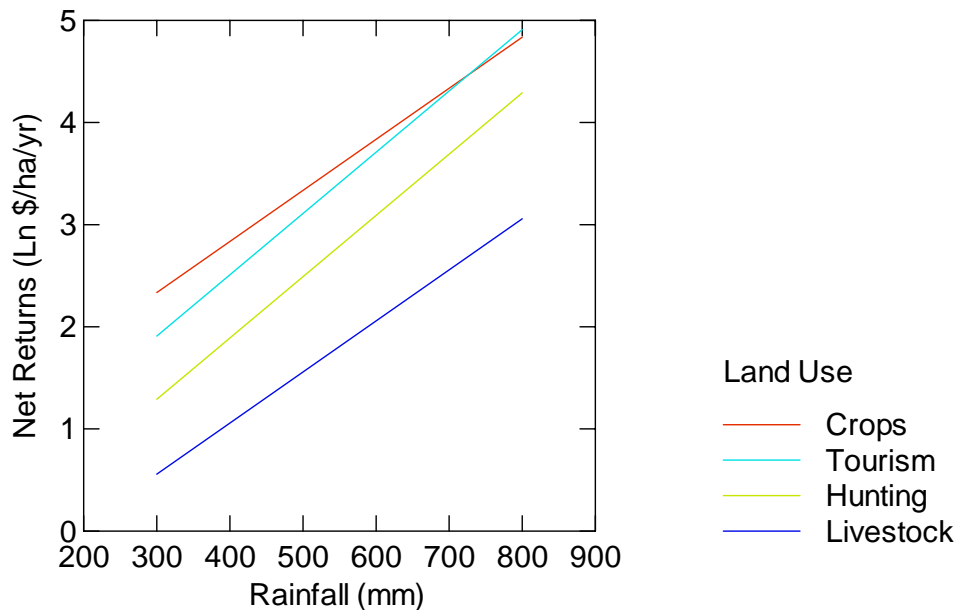
Figure 1 (below)² shows the net returns (\$/ha/year) to crops, tourism³, sport hunting⁴ and livestock in pastoral areas as a function of rainfall.

While crops always yield the best returns per hectare, much below 500mm of rainfall agriculture is really only practicable in small, intensively managed plots.

In terms of wildlife use, tourism always yields better returns than does sport hunting (while 1,000 people a year can observe a herd of 1,200 buffalos only 5 people can hunt them), although the differential is less in areas of lower rainfall.

Livestock yield the poorest returns.

Net Returns to Pastoral Land Uses



¹ This note is not (yet!) for formal quotation

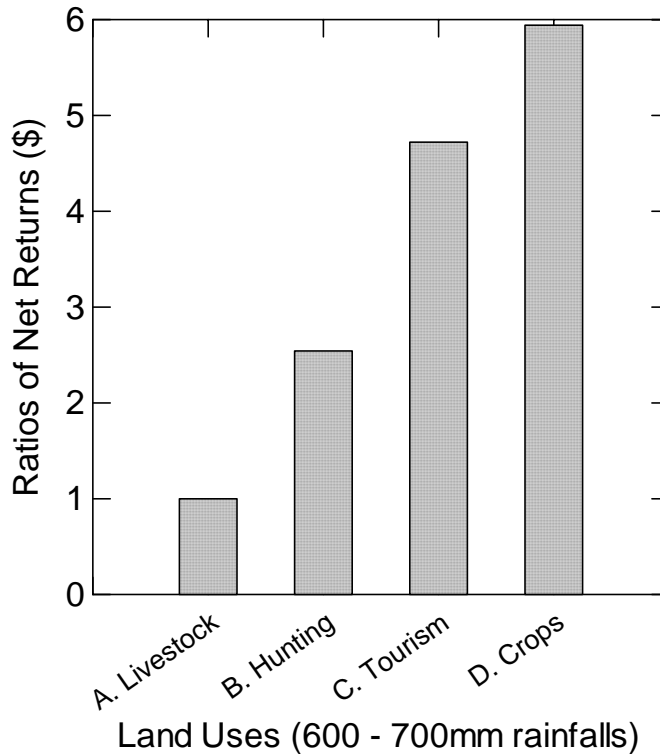
² Fitted regression lines of the form $\text{Ln}(\$ \text{ net return}) = \alpha + \beta * \text{rainfall}$

³ Tourism returns from eastern and southern Africa

⁴ Returns to sport hunting from Tanzania, and southern Africa

These net returns are shown in Figure 2 as ratios with respect to livestock for the 600mm – 700mm rainfall band. Thus, for every \$1 of net returns yielded by livestock, the net returns from hunting, tourism and crops are \$2.5, \$4.8 and \$5.9 respectively.

Net Returns (\$) Compared With Livestock



However, the assumptions of these relationships must be borne in mind. With both tourism and sport hunting, the data assume that the landowner is capturing all the wildlife rents: in other words, that the landowner is managing fully the tourism and/or sport hunting operations. However, we know that over most of the rangelands in Kenya the landowners and users (i.e. the group ranches) capture around 10% - 15% only of these potential rents, most of which are subsequently siphoned off by elite groups. Real returns to the group ranches are thus in line with, or less than, returns to livestock. So while tourism and sport hunting can make useful additions to ranch income they cannot compete with livestock in terms of yields, so cannot always provide real incentives against development and sub-division.