

ID: 144 Productivity and economic impact of the different technological strategies designed for extensive livestock production of the Basaltic Region of Uruguay: cow-calf subsystem

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The Uruguayan Basaltic Region stands for 23% of the agricultural land of the country and it has a strategic importance on local economy and social and territorial development. Basaltic soils rooting depths fluctuate from bare unaltered rock to 1 meter depth and they usually present high fertility and clay content.

During the last 10 years, livestock production systems have been facing considerable changes because of the agricultural (soybean) and forestry boom, which resulted in higher land price and rent. Because of this new scenario, livestock farmers had to become more and more efficient in order to keep their business profitable. Bovine stock rocketed and livestock productive operations switched to a more intensive scheme, especially concerning rearing and fattening activities.

Three different strategies were outlined to evaluate its productivity impact on commercial systems.

a) **Extensive Cow-Calf System (EXT):** Exclusively natural grassland-based system, with 100% male calves and the surplus female calves' sales, as well as cull cows. 2 year-old mating and 71% calving rate.

b) **Improved Cow-Calf System (IMP):** 12% oversown pastures, with 100% male calves and the surplus female calves' sales, but cull cows are sold with slaughter weight. 2 year-old mating and 74% calving rate.

c) **Intensive Cow-Calf System (INT):** 14% high performance artificial pastures, structural supplementation, with 100% male calves and the surplus female calves' sales. Cull cows are sold with slaughter weight. Heifers mate at 15 months of age and 79% calving rate.

Some conclusions of this modeling are:

a) Regardless of the evaluated system, farmers improved their income in the 2011-2013 period compared to the first evaluated period.

b) Income increases with intensification.

c) Economic impact of IMP vs. INT decreases in the second evaluated period, due to less area for calving cow at the expense of fattening cows (less calves).

d) INT system increases overall system efficiency, as a result of a higher calf production.

