Comments on: The African oil palm in integrated farming systems in Colombia.. by A. Ocampo

From Robert H. Faust <drfist@ilhawaii.net>
Comments on Alvaro Ocampo's paper

The potential of Hair sheep in the tropics: As a researcher and active Hair sheep purebred producer (St. Croix), I agree with the observations of the Hair sheep trials, Hair sheep and N fixing trees and forage. It is an excellent small farmer system. These sheep are the world's best recyclers, can utilize feed that nothing else will eat: banana trash, palm fronds, on and on. I have developed a system to shorten the fallow (milpa) cycle by using Hair sheep and N-Fixing trees, *Sesbania.* Using the sheep in an orchard situation provides the highest production per hectare possible with the least effort. Hair sheep systems are practical and manageable by small family farmer and the meat produced feeds people and reduces the need to hunt and deplete wildlife.

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From Jean S. Zoundi <zoundi@burkina.coraf.bf>
Comments on "The African oil Palm in integrated Farming Systems in Colombia"

" On the experiment on supplementation with blocks containing oil, can the effect be attributed to the extra energy (by-pass ?) or to the nitrogen? Would it bean additional effect on the Brachiaria pasture?"

I am enthusiastic about using multinutrient blocks for supplementing livestock. Results are very promising.

Considering the experimental protocol and the block composition (10% urea, 10% rice polishings, 40% molasses, 15% quick lime, 10% rice husks, 5% mineral salt, and 10% crude palm oil or solubilized fatty acids), I think that the rather high Average Daily Gains (ADG) obtained

are not only due to the energy but to the cumulative effect of energy and fermentable nitrogen which boosts micro-organisms efficacy in the rumen. Proteins included in the rice bran certainly had an influence as well.

In this study, pasture quality (ADGs obtained with *Brachiaria* only, show that it refers to a good quality pasture) might not permit to clearly demonstrate the cumulative effect due to the nitrogen! Nevertheless, the hypothesis of a cumulative action is most likely to happen and could be verified with another experimental design.

In the case of diets based on poor quality feeds (Sahelian rangeland, sorghum stalks), this cumulative action (energy and nitrogen) was clearly demonstrated on farm on Djallonke sheep (Zoundi et al., 1996). In this experiment, pod powder of *Piliostigma reticulatum* (local fodder tree) was used as a source of fermentable energy and was mixed with urea (2.5% of total diet). The additional ADG related to this supplementation reached 59,09 g for some treatments. The rest of the diet was based on sorghum stalks and 20 to 30% of cotton seed cake or *Cajanus cajan* (Pigeon-pea) leaves.

It was also demonstrated that the diets including less than 30% of external inputs (not produced on the farm) were giving the best economical results (costs-benefits analysis from Amir P. and Knipscheer H.C., 1989). These conclusions show that for a category of producers, the smallholders with low capital and practising subsistence agriculture, optimizing local resources to increase milk and meat production and income is a promising alternative.

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