

Comments on: Role of multinutrient blocks for sheep production... by Dr. Ala D. Salman

From Jean S. Zoundi <zoundi@burkina.coraf.bf>

Comments on sixteenth paper "Role of multinutrient Blocks for sheep production..." by Dr. Ala D. Salman

I am really pleased with the topics covered by this second FAO electronic conference. They are very pertinent and well in line with scientists', extensionists and political decision makers' concerns related to the improvement of animal production.

The multinutrient block is a very interesting solution to the problem of nutritional deficiencies that animals are facing for a large part of the year and especially during the dry season.

In Burkina Faso, the blocks (molasses-urea) were tested on sheep with FAO assistance in 1987-88 and the results obtained were very conclusive. Taking into account these results, the Ministry in charge of agriculture and animal production launched a large scale campaign of production and extension of these blocks.

There are two concerns at the moment:

How to enrich the blocks?

How could these blocks be made more attractive to the producers through integrating locally available ingredients?

We are focussing our present research on looking for locally available ingredients which could be used to manufacture these blocks. These formulae will then be assessed on station and on farm on the animals. Several ingredients are available in the villages: millet and sorghum bran, legume straw, Nere powder (*Parkia biglobosa*), *Pilostigma* powder (*Piliostigma reticulatum*)... We are taking advantage of all these potential ingredients within our on-going research programme.

I am particularly interested in the effect of the blocks on the reproduction performances of ewes reported by Dr. Ala D. SALMAN and I would like to get more information on the experimental protocol and especially:

1. When the blocks were used? During the heat or at any time?

2. For how long this supplementation has been given?
3. How was this supplementation given: blocks offered ad libitum or during limited periods during the day?
4. Was this assessment made on farm or only on station?

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**From Ala D. Salman c/o FAO-Iraq <FAO-IRQ@field.fao.org>
Answers to Jean Zoundi's questions on the effect of multinutrient blocks on the reproductive performance of ewes**

I would like to comment on the questions raised by Dr. Zoundi on the effect of multinutrient blocks on the reproductive performance of ewes:

1. When the blocks were used? During the heat or at any time?

The blocks were used during summer time, which is the main mating season of Iraqi sheep which coincides with cereal stubble grazing.

2. For how long this supplementation has been given?

Ewes were supplemented with MB for 28 days prior to ram introduction and for 51 days post mating.

3. How was this supplementation given: blocks offered ad libitum or during limited periods during the day?

Blocks were offered at certain time during the day (evening, after the flock returned from stubble grazing). However, blocks were offered ad libitum during this time.

4. Was this assessment made on-farm or only on-station?

These experiments were conducted on-station. But during last summer (1996), we conducted on-farm experiments on three locations in Mosul area (northern part of Iraq). The early results of these on-farm experiments are promising.

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From Rena Perez <71055.111@compuserve.com>

Comments for Jean Zoundi on MUBs for ewes

Since mid-1996, multinutrient blocks have been used in several reproductive (Pelibuey) sheep herds (on-farm) pertaining to the Cuban sugar industry. The blocks are placed, under cover, in the night paddock or the block mixture is placed in chicken troughs which are then hung from the roof beams. The animals graze in the cane fields during the day and have access to the blocks, or the mixture, during the mid-day rest or at night. The ewes have now begun to farrow (12/96) and the farmer's comments are:

1. "used to be that only 55-60% of the ewes farrowed, now between 90-95%"
2. "this year, more ewes are dropping twins"
3. "the young ones aren't dying anymore".

To answer the four questions:

1. When the blocks were used? During the heat or at any time?

The blocks are accessible year round. The animals regulate intake. In the wet season, when the grass is green, they tend to reduce block intake. The reverse happens in the dry season.

2. For how long this supplementation has been given?

Six or seven months, since May/June of 1996.

3. How was this supplementation given: blocks offered ad libitum or during limited periods during the day?

Basically at night, fodder and water must be available.

4. Was this assessment made on farm or only on station?

Only on-farm.

Because our work involves the sugarmills, there is a tendency to use either molasses or combinations of molasses and filter-press mud as a substrate for the urea. However, once I visited a region in South America where both molasses and filter mud were unavailable and humus, from worms, resolved the problem.

Rena Perez

**From Malcolm Knox <mknox@chiswick.anprod.CSIRO.AU>
Comments on Jean Zoundi's questions on paper 16 (The Role Of
Multinutrient Blocks For Sheep Production in Integrated
Cereal-Livestock Farming System...)**

I too have found this to be a very interesting conference and I am happy to be able to make a small contribution to the discussion. My field is primarily nematode parasite control in ruminant livestock but most recently through ACIAR Project 9132, I have been investigating the importance of low cost nutritional supplements in the development of parasite resistance/resilience in young sheep. Our work has employed urea-molasses blocks (UMB) for its obvious nutritional benefits as highlighted by many of the contributors to this conference.

One study in which I was involved with Peter Manuelli and Faiyaz Mohammed of MAFFA, Fiji, looked at the benefits of UMB supplementation in young ewes 7 months prior to first mating through to weaning of their first lambs (16 months total). Blocks were available in small shelter sheds in the paddocks and animals could access them ad libitum. In this trial UMB supplementation almost doubled the numbers of lambs born (40 vs 24), increased the number of lambs weaned (39 vs 20) and almost doubled the total weight of lambs weaned (405kg vs 222kg) when compared to unsupplemented controls grazing low quality pasture. This nutritional treatment also substantially reduced the requirement for salvage anthelmintic treatment (treated if number of eggs per gramme of faeces over 3000) during the trial period (55 individual treatments vs 92 treatments) .

Therefore in the Fijian situation where low quality forages predominate and nematode parasites are an endemic problem UMB supplements are now a recommended part of the sheep rearing enterprise. Later trials on both sheep and goat farms have had a highly positive response from farmers due to increased productivity of their flocks. Increased adoption of UMB is assured particularly since MAFFA has introduced low technology block preparation methods through on farm field demonstration days.

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From Miltos Hadjipanayiotou <miltos@arinet.ari.gov.cy>

Comments on Salman's paper on blocks

First of all I would like to congratulate Ala Salman and his team in Iraq who managed to put into practice experience on urea block (UB) manufacturing and feeding gained within the FAO/UNDP/SYR/89/003 project and outside the region.

Indeed, UB manufacturing technology has been improved considerably in Iraq (mixer, moulding equipment etc). The type of mixer they use is more efficient than any concrete mixer, particularly when working on formulae without any molasses.

Date pulp, like molasses, is an excellent material for making good quality UB. In case this material is not abundant, it is essential to work on formulae with the minimum level of inclusion so that more UB of good quality will be produced.

In the on-farm studies UB intake was considerably higher than previously reported values. Indeed, if the intake of UB by a 40-50 kg LWT sheep is 346 and 416 g/head/day, then this is not a block, but another kind of supplement that when mixed in mash form with the other ingredients of the total daily feed allowance would most likely give similar results to UB.

Knowing that animals had access to UB after the day grazing, the importance of offering UB of good hardness and compactness for securing small and frequent meals is becoming greater. In the on-farm trials in the Mosul area (Nazah & Al-Jernaf), the use of UB did not improve performance (milk yield 342 vs 358 g/head/day, and 500 vs 362 g/head/day) compared to the control diet. Contrarily, in the on station trial UB and sunflower seed meal supplementation improved milk yield significantly (control 402, UB 888, sunflower 867 g/head/day).

Why these differences between tests/trials?

How hard and compact were the UB used?

Were the UB consumed in small and frequent meals?

From: Ala Salman c/o FAO-Iraq <FAO-IRQ@field.fao.org>

Answers to Hadjipanayiotou's questions

I would first like to say to Dr. Hadjipanayiotou that his encouragement and continuous support to the Iraqi team is highly appreciated. The Iraqi

team gained a lot of experience from his work in the region and previous consultancy report to Mashreq Project (ICARDA/UNDP/AFESD. RAB.89/026).

Answering the questions raised:

1. Why these differences between test/trials?

Differences were mainly due to differences in the objectives of trials/tests in on-station and on-farm. In on-station trial, the objective was to use the block as a complementary supplement. On the other hand, the objective of on-farm trials was to set a formula for blocks according to the real need of the farmers because of the shortage of barley grain nowadays in Iraq. This is why block formulation and the outcomes were different between trials/tests mentioned.

2. How hard and compact were the UB used?

Both, the hardness and compactness were good in on-station trial whereas, hardness and compactness were medium in on-farm trial in order to increase block intake.

3. Were the UB consumed in small and frequent meals?

The block was offered after the flock returned from grazing in the evening. Blocks from then on were offered only from evening until the next morning prior to the flock moving out to grazing field.

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