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Moderated starch feeding for sustainable ruminant agrotechnology

Abstract

This article demands a global call on moderated starch feeding to enable optimizing rumen fermentation, nutrient efficiency, ruminant health and economics, and environmental sustainability. The incorrect trend in elevating starch feeding in modern diets need to be stopped. The sustainability of the postmodern ruminant industry lies on moderated feeding of starch from cereals.

Keywords: starch, feeding, ruminant, efficiency

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Philosophy and discussion

The modern ruminant industry has critical roles in food safety and security.[1,2] However, the growing demands for animal proteins have largely and recklessly led policy-makers, animal raisers and producers to want to increase milk and beef production mostly by unwise and blind increases in starch feeding. Such an absurd policy has kept the global ruminant industry from realizing its optimal health and economic perspectives. Challenges include the increasing losses due to suboptimal longevity, increased costs of treatment and animal removal, and unstable feed, milk and meat markets which have adversely affected the world ruminant industry. Multifaceted health problems including metabolic diseases and disorders (e.g., sub acute rumen acidosis and related immune deficiencies), consequently, occur often. Moreover, inter-diet and inter-phase adaptations have become more challenging in the face of such ill-mannered starch nutrition to super ruminants. An enforced global action has been disseminating the issue broadly to critically change the situation through different pragmatic strategies of starch feeding management.[3–10]

Among notable examples of challenging starch management are dairy cattle periparturient period and feedlot adaptations to high-starch diets. Over-modernization has driven ruminants too far from their natural grazing and feeding behaviours that, in consequence, has created major challenges in the management of such critical phases of production.[5,10] It is by all means unwise to first over-modernize an inherently natural industry and then absurdly search for management strategies to solve the already man-made problems in rumen and ruminant physiology. Such problems could have been well prevented from happening. Thus, the trend is completely drivelling. Production systems (housing, feeding, milking, and treating) need to be adequately close to natural ruminant behaviour and ecology to enable efficacious management of rumen and ruminant transition through such challenging phases of production. This management system would be key to victorious raising that would occur only with moderated starch feeding. The result would be avoidance of back-breaking production peaks and unrestrained tissue mobilization towards superior health, longevity and efficiency. Wisdom is a must in achieving lasting concurrently improved production and health by moderated starch feeding.

Formulating dairy diets with ≥ 35-40% cereal grains of particularly barley and greatly processed corn just makes possible encountering a real tragedy. As far as feedlot production, this suggests that feeding diets made of 80-95% grain should also be revisited from a postmodern standpoint. Despite the many aspects requiring research, it is comprehensible that the world ruminant industry is in need of an action for moderated starch feeding. This is to cease the striking rising trends of animal health issues that harmfully impact food safety and security for humans.

Implications

The rising unreasonable trends of health issues in modern ruminant enterprises have, in substantial degree, been resulted from unwise amounts and choices of starch in commercial diets. A global commitment must be made to stop the howler and to moderate starch feeding in high-merit dairy and beef ruminants.

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Conflict of interest

Author declares that there is no conflict of interest.

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