

The Bale Shredder becomes the Bale Processor

The bale shredder has been transformed into the bale processor and the difference between the two is big and important to your bottom line. The technological changes that engineers have applied to the old version of the machine have made it into an efficient feeding tool of the 21st century that every sheep and beef farm have access to through local dealers in Canada, Australia, and the United States.

Every advance in research requires collateral advances in equipment to allow the application of the research results, and research into feeding and feedstuffs has generated many good principles to guide the producer into more efficient use of forages. Research had declared chopping forage as the quickest way to improve utilization of medium and low quality forages. This classification of forages is what the cow/calf and ewe/lamb industries use almost exclusively. Add to this crop residues such as straw and the value of precision chopping becomes obvious. Two decades ago the bale shredder became popular after being around for many years. The primary reason for this occurrence was a method of quickly delivering bedding from round bales to large numbers of animals some located in remote areas from the home ranch. The quickness of processing even frozen bales led the producer to using the bedding machine version for feeding. This was a misapplication of the intent of the design but served as a request from the industry to manufacturers to develop a more precise system which the first manufacturer to respond did so ten years ago by introducing the feed chopper as an option to the originally designed bedding format. Producers who routinely use the chopper for feeding straw and medium or low quality hay report savings in their annual forage requirements by 25% to 30%. Forage which was previously refused, sorted through and subsequently wasted is now consumed. This reported value is in agreement with statements from Dr. Steve Loersch of Ohio State University from 2008 which states *“One effective option producers rarely consider is hay chopping. Chopping hay allows the cows to eat 25% to 30% more energy”*¹. Other researchers confirm the results such as Dr. D. M. Jackson, Professor of Animal Nutrition, Univ. Animal Agriculture and Technology, Pantnagar, India who reports *“the grinding of straw increases*

*consumption leading to higher digestible energy intakes of the order of 30%. In terms of net energy intake the increase is somewhat more than this because the net energy value of straw is increased by grinding*². These findings coupled with positive on farm results sponsored the next innovation which was adding grain to the forage mixture and homogenizing it to prevent sorting. It is now possible to accurately deliver grain into the diet homogenized into the windrow and adequately scarified for either sheep or cattle. As these innovations are implemented they have positive financial outcomes and make it possible to utilize advances in nutritional research.

Historically positive feeding results were difficult to quantify because the flail design on the drum of the bale shredder removed some of the more digestible portions of the forage without completely homogenizing the material into the swath. As a result the use of a machine designed for bedding as a feeding device, was discouraged by extension and university personnel based on studies carried out more than a decade ago. However ten years of innovation present a very different reality. The newest bale processors can now blend hay, straw, and grain simultaneously into a balanced diet completing the chopping of the load of bales in under two minutes. On farm results show a significant financial savings in both gestating and lactating cow diets by the utilization of straw or greenfeed in conjunction with hay and grain rather than the traditional long hay diet. Return to investment on the processor allows a payback in the efficiency it generates.

Manufacturers have been on a path of continuous improvement of forage processors since it became clear that a tool was needed at the farm level that put precision feed processing in the hands of the primary producer. At this level decisions made on the farm regarding feeding and utilization of forages and grain could be made on demand as conditions and stage of production of the animals changed. As with all other farm animal species beef and sheep have remained profitable by continuously gaining efficiency. The lead force is research followed by the development of necessary tools to implement new information on the farm.

1. Dr. Steve Loersch, Ohio State University 2008, posted on <http://www.thebeefsite.com/articles/1558/increasing-the-digestibility-of-forages/>

2. Dr. D. M. Jackson, Professor of Animal Nutrition, Univ. Animal Agriculture and Technology, Pantnagar, India Original document:
<http://www.fao.org/DOCREP/003x6510E/x6510E02.htm>



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