

Bamboo Might Be Forage Of The Future

By **Klaire Bruce**

When most people think of bamboo, they picture an image of a giant black and white panda nibbling bamboo shoots in the mountains of China. Replace that image with one of Jim Criger, of Springfield, Mo., harvesting bamboo stalks to feed his horses and goats in the wintertime and you'll have an idea of why bamboo might some day become a great sustainable forage for North American farmers.

What is it about bamboo that makes it such a fantastic forage option? Jim has found that bamboo will grow where other forages will not. Such as rocky or swampy areas that might otherwise be wasted space. There is no need to take up valuable pasture space to grow a successful bamboo stand. Jim is a smaller scale farmer and says that he does not have a large enough farm to justify purchasing the equipment to cut, bale and store hay. Bamboo works for Jim because his stand can be maintained by hand at little to no cost – the only money he has invested in it was his initial output to purchase the starter plants, which cost between \$20 and \$50 per pot.

Jim has had his bamboo stand for 3 1/2 years. It takes between 2 to 3 years to establish a mature enough stand for it to be

fed sustainably. He harvests his bamboo stalks using a brushcutter tool that has a high-powered weed eater motor with a circular metal blade combined with chainsaw teeth at the end.

The protein content of bamboo is high, rivaling good alfalfa. One of Jim's favorite varieties, *Bissetii*, has a spring protein content of 15.17% and a winter protein content of 21.55%. The percentage of protein varies among different varieties of bamboo, but one thing they all have in common is that the nutritional levels are highest in the winter. Jim recommends cutting back the stand no more than 50 percent during the harvest season. That way, what has been cut will grow back the following year and what has been left will already be established for the next harvest season. Bamboo will sprout once a year, typically around May, so taking care to not cut a stand back completely each harvest season will ensure the long lasting success of a stand.

Bamboo can be fed to most livestock – horses, cattle, pigs and other farm critters will all benefit from the high levels of nutrients within the stalks. Jim says that his goats are especially fond of the exotic roughage. As far as challenges to growing a bamboo stand go,



Jim Criger has found that bamboo will grow where other forages won't. He feeds it to his horses and goats during winter.

Jim says, "There isn't one. It's super easy." With such high protein content and such low maintenance, Jim expects many more farmers to catch onto this unique form of fodder.

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It takes 2 to 3 years to establish a mature stand of bamboo.



Portable Fence System Simplifies Cattle Management

If you saw Norm Ward's blaze orange trailer on a highway, you might think it carries traffic safety cones. But it's actually called a "Power Grazer" and it's a portable fencing system designed to make it quick and easy to put up miles of temporary fencing.

"I came up with this product because our ranch needed more than just permanent cattle fencing," says Norm. "We do a lot of intensive grazing, moving cattle from one pasture to another." Ward first built a prototype, refined it after using it on his own ranch, and now offers it for sale.

The unibody construction of the Power Grazer uses 12 gauge and 14 gauge sheet metal. Reinforced sidewalls support the 3-ft. diameter spool that rides on pillow block bearings. "I wanted the machine built strong enough to spool the wire, but light enough so I could pull it with my Quadtrack," Ward says. "It weighs about 1,100 lbs. fully loaded, and my 800cc Quad can pull it without a problem."

The Power Grazer rides on torsion spring axles and carries up to 2 miles of braided fencing. The storage rack holds 100 metal posts and a screw-in grounding rod. On top is a recessed solar panel to collect energy that is stored in two deep cycle batteries. Those batteries hold enough to energize 35 miles of fence and also run the reel that winds up

braided fenceline. "In case the juice runs out," Ward says, "there's a hand crank as backup."

The trailer has a ball hitch for truck towing or a 3 pt. hitch for towing behind a small tractor. There's even a receiver on the back to hook up another Power Grazer or to pull a salt box or water tank to a remote pasture.

Ward uses his machine throughout the grazing season. He says the Power Grazer is an inexpensive portable fencing tool for managed grassland, swath and bale grazing.

Ward says it takes 2 people less than 2 hrs. to set up or take down a mile of fence using the Power Grazer, a system he first built back in 2009. In 2011 he contracted out the trailer manufacturing. He finishes the electrical component installation in his shop. The solar panel is a 135-watt model made by Kyocera. Energizers from Galagher or Stafix can also be specified by customers buying the machine. A standard energizer powers up to 20 miles of fence and has indicator lights to handle up to 35 miles of multi-strand fence. He also offers a Stafix energizer that connects to a 110-volt electrical source.

Ward equips the Power Grazer with up to 2 miles of 3/8 in. diameter red and white Turbo Equi-Braid rope. He says the product, which has 9 strands of metal woven into a braid, is easy to see, easy to handle and is almost impossible to break. If it does get cut



Power Grazer portable fencing system makes putting up temporary fencing a quick and easy job.

or damaged, it's easy to repair.

Posts stored on the Grazer are made from lightweight steel with an insulated loop at the top to hold a single strand of wire 34 in. off the ground. The 100 posts stored on the rig will fence about a mile. The Power Grazer is priced at \$11,000 and includes the batteries and fence charger.

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Solar-powered batteries operate a reel that winds up fence.

"Saw Moose" Firewood Holder

"It holds a pile of branches for easy cutting so I don't have to bend over, and also saves on chainsaw fuel," says Kent MacDougal, Yonges Island, S.C.

An 8-ft. long 2 by 6 is sandwiched between two 2 by 8's spaced 4 1/2 in. apart and mounted 2 ft. off the ground, supported by several vertical "wickets". The wickets are 4-ft. long 2 by 6's, placed on 14-in. centers, and attached at the bottom with another 2 by 6. The 2 outside wickets are 6 ft. long and buried 2 ft. deep in the ground. He just stacks brackets on the crossbar and cuts between the uprights.

"The first thing I put in the saw moose is a small sacrificial pine tree, and then I add limbs and branches until it's full,"

says MacDougal. "After that I bust out my chainsaw, and a half dozen or so cuts later I'm stacking a hundred pieces of firewood.

"It saves on my back and also saves fuel as the chainsaw only runs for a minute or so. Another advantage is that I'm willing to cut much smaller branches than if I had to saw them individually."

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"It saves on my back and also saves fuel, as the chainsaw only runs for a minute or so," says Kent MacDougal about his "saw moose" firewood holder.

