

Recycle Nutrients by Turning Cows into Manure Spreaders

By Wayne Tankersley

These days, we hear a lot about recycling. As good stewards, people are encouraged to recycle. So we do. Plastic, oil, wood, paper, rubber and metal are all things we recycle. Agriculture has not been exempt from this renewed recycling emphasis. Because of environmental concerns, recycling animal waste is given a great deal of attention. One normally thinks of animal waste recycling as a large confinement farm issue. However, this is no longer true.

The recent hefty increase in fertilizer prices has farmers, large and small, looking at ways to lower this major production expense.

One key factor in the renewed focus on nutrient recycling has been the development and use of persistent white clovers like **Patriot** and **Durana** in pastures. These clovers “manufacture” enough nitrogen to support themselves with enough left over to feed other nitrogen hungry pasture grasses as well.

While some fertilizer nutrients are exported each time a calf or cull cow leaves the farm, the vast majority remain on the farm. Research has shown that 75-85% of the nitrogen, 70-80% of the phosphorus and about 90% of the potassium applied and consumed by livestock is excreted right back on the land.

Unfortunately, livestock don’t understand the concept of evenly distributing their excrement and this becomes a challenge for farmers trying to take advantage of free fertilizer. There are several simple management techniques that can be employed to insure better manure distribution and thus more uniformity in nutrient recycling.

First, think about where cows tend to congregate. They spend a great

amount of time around hay feeding areas, mineral feeders, shady areas, protein lick tanks and water troughs. These areas receive lots of excrement. Consider spacing these apart some distance or periodically changing the location of these areas. This increases the area over which feces & urine are deposited.

Dividing pastures into smaller paddocks for rotational grazing greatly helps to distribute recycled nutrients. Periodic use of a pasture drag on pastures scatters manure piles and more evenly distributes nutrients. These techniques can be accomplished with little expense.

Finally, if legumes are not established already, consider adding them to the pasture forage mix. Research has shown pastures containing legumes such as white clover to significantly increase animal performance while providing 75-150 lbs/A of nitrogen annually to the pasture.

Value & amount of nitrogen fixed by legumes

<u>Crop</u>	<u>N Fixed Lb/A/yr</u>	<u>N Value, \$@</u>	
		<u>\$.35/lb</u>	<u>\$.45/lb</u>
Red Clover	75-200	\$26-\$70	\$34-\$90
White Clover	75-150	\$26-\$53	\$34-\$68
Vetch, lespedeza	50-150	\$18-\$53	\$23-\$68

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