

# Glenn's Udderings

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tested and scouted by crop consultants on a regular basis, and the reckless use of fertilizers and chemicals is being replaced by best management practices.

Soils and manures are being analyzed for nutrient content and applied in accordance with crops' needs. Nitrogen tests are run on corn fields when corn is about knee high to more accurately determine nitrogen levels in the soil so proper amounts can be sidedressed for more efficient use by the crop.

Similarly, fields are monitored for insect, disease and weed pressures, and chemicals are recommended only when these pests reach threshold levels, or when other means fail.

### Nutrient Management

Soil testing and manure analyses, as discussed above, help reduce excess applications of nutrients. To avoid excess applications of manure, many farmers are exporting manure to other farms that need it, or are processing it and selling it as compost or as a soil amendment.

Nutrient management plans are being developed for many farms to serve as a guide for applying manure and fertilizers in a safe, responsible and efficient manner.

Alfalfa, planted after corn, helps to reduce phosphorus and potash levels that have built up in the soil during the corn phase of the rotation. Where more nitrogen is needed, legumes such as beans, alfalfa and clover are planted to fix atmospheric nitrogen, thus reducing the reliance upon chemical fertilizer.

Conversely, if soil nitrogen levels are high, annual crops such as grasses, corn and sorghum are planted to utilize the nitrogen and to help prevent it from leaching into the water table.

Long-term manure storages are being built on many farms for several reasons. It eliminates the need for daily hauling, thus enabling farmers to apply manure when soils are "fit" and closer to the

time crops can utilize it efficiently. This, coupled with quick incorporation, reduces nutrient loss and soil compaction.

Farmers are concerned about the quality of water their family, their herds and their flocks drink. Thus, it is desirable for them to protect their wells and streams. The above practices help them accomplish this. In doing so, it also helps to keep our rivers and bays cleaner.

Our forefathers built barns close to streams and close to sources of water that fed their shallow, hand dug wells and their springhouses. Since then, the number of animal units on these farms has increased many fold! This high animal density on sensitive sites presents some farmers with serious nutrient management challenges.

Many of these farmers are fencing livestock out of streams. They are replacing their dirt barnyards and exercise lots with concrete barnyards and sodded sacrifice lots. Some have gone to total confinement of the herd, or have built new facilities in less sensitive areas.

### Recycling Wastes

Farmers are great recyclers! Many of the feeds they use are recycled wastes that, if not fed, would be filling up our landfills.

Examples include soybean oil meal, cotton seed, canola, beet pulp, brewers grains, distillers grains, bakery wastes, cannery wastes, candies, etc.

More recently, newspapers and old phone books have been ending up under cows as bedding. Leaves are being applied to fields or used as a source of carbon for composting manure. For decades, they have been using crop residues as bedding, and recycling it back to the field as manure.

### Energy Conservation

Milk is warm when excreted from the cow, but it must be cooled down quickly to a tempera-

ture of less than 40 degrees for safe keeping. A lot of heat is driven off during this cooling process. Farmers are using heat exchangers to help capture this heat so they can use it to heat water, their milk houses and their milking parlors.

Many farmers are harvesting their grain at higher moisture levels and ensiling it as high moisture grain. In addition to reducing field losses, this technique eliminates the need for artificial drying and the use of electricity and petroleum-based fuels.

To remain healthy and to attain efficient levels of production, animals need fresh, clean air, and they need to be comfortable. To accomplish this, farmers have relied heavily on fans.

In recent years, many farmers are relying more heavily upon natural ventilation, thus reducing their reliance upon electricity.

Farmers who rely heavily upon horses and mules and diesel powered generators have less need for petroleum-based fuels and electricity.

On some farms, methane gas from manure is being captured and utilized for generating heat and electricity. Attempts are being made to adapt methane generation to smaller farms. If accomplished, it may reduce methane emissions into the atmosphere. Improved animal nutrition and balanced rations also helps to reduce methane production by ruminant animals.

Many farmers are active environmentalists. As you can see from the examples just cited, they have accomplished much. They need to be commended for their accomplishments. However, the job is not yet done, and probably never will be done as we continue in our attempts to make our communities a better place to live. It is a responsibility we all share.

### Farmers Are Environmentalists

Farmers have been environmentalists long before the environmental movement became popular.

Good farmers are good stewards of the land. It is simply good business!

No farmer in his right mind wants to pay a big price for farm land and spend a lot of money on lime, fertilizer, seed and pesticides, only to watch his investments wash away because of poor conservation practices. He wants to build up the soil so he can obtain good crop yields while also protecting the environment.

Sometimes we fail to appreciate all the things farmers are doing to help protect the environment we all share. Perhaps they have become such a routine part of good farm management practices that we tend to take them for granted.

### Soil Conservation

For decades, farmers have been planting crops in contour strips, alternating row crops with sod crops. Steeper slopes have been terraced and runoff water has been diverted into sod waterways to prevent the formation of deep gullies.

Cover crops, planted after

harvest, help prevent soil losses and reduce the leaching of soil nitrogen. They are also a source of early spring forage, a green manure crop to incorporate into the soil, or a crop that can be harvested for grain and straw.

Some steeper slopes are planted to permanent hay or pasture thus reducing the need for tillage on these highly erodible soils. There has also been increased usage of no-till and minimum-till techniques. Besides reducing soil losses, these practices also reduce the use of petroleum fuels.

### Fewer Chemicals

More and more farmers are looking for non-chemical ways to control pests. Thanks to biotechnology and genetic advancements, they now have a greater array of insect and disease tolerant crops to choose from. Insecticides are being replaced with helpful parasites, bacteria, fungi, traps, etc. Rotation of crops helps to reduce problems associated with insects, diseases and weeds.

Wide rows have been replaced with narrow rows, which produces a thick shade canopy more quickly and provides better weed control. The shade canopy also reduces surface evaporation of soil moisture.

More and more fields are being

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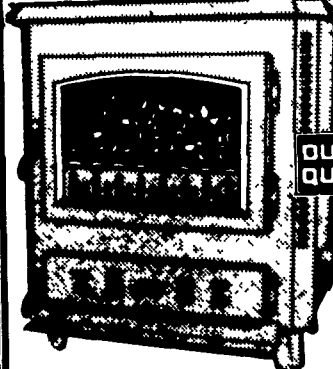
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