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HORSE DOESN'T LOVE TO GRAZE AFTER A GOOSE." These words of wisdom were written by a little-known and little-appreciated playwright named John Crowne in 1694. Some older poultry literature also refers to livestock not liking to graze after geese, and it's easy to see why. Geese can graze vegetation too short for any other creature to find sustenance in it. If geese are put on grass when it is too long, they will trample it flat to the ground with their big webbed feet so that no other animal can get their mouths into it. While grazing and trampling, they also liberally douse the ground with their large, damp droppings. I wouldn't want to graze after a goose either! Not immediately after the goose, anyway. But give the pasture time to rest after the goose has gone from it, and it will be better than before the goose arrived. My experience has shown that with a long-term management plan, the activities of waterfowl as they graze and fertilize can go a long way towards renovating a pasture, hayfield or orchard.

I began grazing waterfowl in a section of our horse pasture and in our small orchard two years ago. My husband and I started with a poor selection of pasture plants. There were a few rich spots, full of nutritious dandelion and clover, but we had many nuisance plants, the worst being buttercups. The pasture had reached this state over years of selective grazing by the horses for the plants that they liked, leaving the plants that no animal prefers to eat to reseed themselves. We contributed to the problem by not mowing, liming, or fertilizing the pasture enough. The orchard had been neglected for over 20 years, and the horses had been grazing in it, while no fertility was added to it at all except for the occasional horse deposit.

Two seasons of grazing by our waterfowl have already altered the land. There is a noticeable difference between the section of pasture that was grazed by our geese and ducks, and the section of pasture that was grazed only by our horses. The waterfowl-grazed section is noticeably more lush, and the types of vegetation in the pasture are changing. Although the waterfowl do not like the buttercup much either, they are slowly making the soil more hospitable to other plants that can compete with the buttercup.

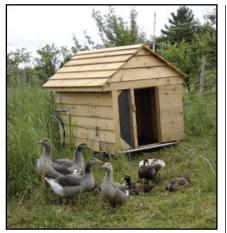
I begin raising my ducks and geese by brooding them in our sunroom. When they are only a few days old, I start carrying the pasture in to them in the form of lush cuttings. They devour the green plants I bring them with more relish than the starter mash. When they are a bit older I begin putting them on pasture during the day, bringing them back in at night. When they are of age to spend the night outside without the brooder lamp, I move them to the "duck house."

The duck house is a small wooden shelter on wheels, with a floor made of hardware cloth. It is loosely based on a duck house illustrated in a book by Eliot Coleman (a farm and garden writer) called Four-Season Harvest. He calls his version, in which he keeps runner ducks, "Duckingham Palace." It is easily moved across the pasture, and it is easily cleaned. I run a hose out to the pasture, and hose out the inside regularly. The poop dissolves and is washed out through the mesh floor. This system works well for us, as we don't over-winter our birds. Our ducks and geese are currently for meat only, and are slaughtered before winter comes. If we were to over-winter them, I would chose housing with a solid floor. A solid floor would also be better for the birds if they spent more time in the house, as it would be easier on the bird's feet. The mesh floor suits me because the birds only spend time in the house at night when they are resting.

I surround their house with electromesh fencing in order to create a grazing area. This kind of fencing can usually be



The dog helps move goslings and ducklings onto the pasture for the day. They will spend the night back in the brooder until they are older.



Ducklings and goslings on long grass in front of the movable duck house.

found at feed stores (where I bought mine) or from mail-order suppliers. This fencing is designed for pastured animals. It consists of lightweight, easily moved stakes attached to plastic mesh that can be electrified with a fencer to keep your animals in and predators out.

Each day I fill the birds' waterers and a child's wading pool with the hose. The child's wading pool provides a place for them to swim and groom themselves. The dirty water they had been swimming in the day before gets emptied onto the pasture. The water that begins the day pristine and clear soon becomes murky with droppings. When this unappealing soupy water is emptied onto the pasture, the vegetation gets watered and it receives a big dose of fertility. I move the location of the wading pool around frequently, to spread the wealth across the pasture.

I feed my ducks and geese an organic chick starter mash for a couple of weeks, followed by an organic grower crumble until slaughter. The birds go through stages in which they consume more or less of the feed provided. At certain times in their development, they do not seem to crave the provided food as much as they crave pasture, while at other times (I think when they are experiencing a growth spurt), they are very hungry for it.

When the fenced section of pasture begins to become overgrazed, I move the flock to a new section. The length of time it takes for this to happen is highly variable. It depends on the state the section of pasture was in to begin with. One indication the land is no longer desirable to the birds, is that they start testing the fence in order to try to move to new ground.

I move the flock in the morning, while

they are still locked up in the portable duck house. The house containing the birds is moved, and then the fencing. This is a one-person job, though it takes practice to create a system of moving the fence that doesn't result in tangles. I then weedwack or mow the just-used section of pasture, if there are remaining rough spots, and spread lime. If there are muddy sections that the birds have churned up with their feet, I seed those sections with a pasture seed mix. I may even over-seed the newly close-mown pasture as well. I am also not opposed to slightly overgrazing the land, as this gives me a greater opportunity to over-seed with a pasture mix. The just-grazed section then rests for several weeks, and may get mowed one or two more times before any animals are put back on it.

Geese are one of the few varieties of meat poultry that can be raised almost entirely on pasture. Geese are vegetarians; they will not eat insects. Their bills are very well designed for grazing, with serrated edges to tear at plants, and a spiked tongue that directs the plants down their throats. Because they have smaller crops, they graze almost constantly. Ducks, on the other hand, will gobble up any insects that they can find, and they are very partial to slugs and snails. This is a great bonus for us, because we have a tremendous slug and snail population on our farm. It is nice to think of them being put to some good use.

In my system of land improvement with waterfowl, the pasture is grazed, fertilized, watered with manure-water, mowed, seeded and limed. It is no wonder that it is on its way to improvement. While there was nothing stopping me from improving the pasture in much the same way without waterfowl, making the birds a part of a system gave the whole procedure a purpose beyond the improvement of the pasture. The growth of the birds and the work on the pasture proceeded together.

This process has worked so well that I feel I will soon have to use caution, as overly lush pasture is not good for horses. However, I have plenty more completely unimproved pasture to improve before my system plays itself out. My goal is to remove nuisance plants and improve fertility to a point, but not to overstep the point where the pasture would become too lush.

The orchard is truly thriving with the added fertility that the birds contribute. The whole method of management improves the soil organic matter content with the addition of both the droppings and the clippings dropped on the ground when I mow. In one section of the orchard there is a shallow root zone with bedrock underneath; I can really see the trees improving as the soil builds and improves in this section.

When the weather becomes cold enough for the growth of the grass to significantly slow, it is time to process the birds. We put five ducks and five geese into the freezer last fall.

The grass where the birds had been was emerald green though the rest of the fields were brown, and the horses kept breaking through the fence to get into it. I suppose a horse does love to graze after a goose after all!



Ducks and geese in the orchard add to the fertility with droppings, and they clean up the fallen debris.