

NORTHEST SARE FARMER/GROWER INITIATED GRANT
FINAL REPORT
FNE04-536: Pastured Rabbits

Goal:

The purpose of the project was to examine the feasibility of pasturing rabbits to sustain a rabbitry on my farm. To reduce feed cost while maintaining animal health and prolific rates by rotationally grazing the mature does after peak production on a less expensive ration of forage.

Farm Profile:

In discussing the different options for my 46 acres of typical WV hillside farming situation, I decided that it would be best suited for berry production. In order to produce organic grown berries, the fertilizer must also be organic. Rabbit manure is considered one of the best organic composts for berry production. To provide the necessary manure, I decided to start a rabbitry. Seasonal rabbit production sustains the costs of the rabbitry, but in the off-season, feed costs were causing a loss of profits.

The rabbitry has become very time consuming without equivalent income to offset the time and expenses incurred in the off season. Pen raised rabbits require a lot of time and feed costs can be high; however, the rabbitry produces roughly 4 wheel barrows of manure every week.

Participants:

WVU Extension Agent, Zona Hutson, project technical advisor, assisted with technical support, like weed identification, possible marketing strategies, alternative farming options, and specialist contacts.

Scott Beaver, local farmer, adopted some of my ideas and also grazed a portion of his rabbits.

Rex Gardner, NRCS, advised on soil enrichment, manure handling and composting.

John Jett, WVU Horticulture Specialist, was available with general information.

Larry Campbell, WVU Extension Agent, Harrison County, participated with suggestions for the rabbitry, as well as, composting.

Project activities:

Due to the late spring start of this project, I could not seed a fresh plot for pasturing and have it ready for this summer. So, I used an existing area, rich in white clover and grasses, that had been limed in early spring.

I built two 10' x 10' square pens with galvanized 1"x 2" wire. Each of these cages are 3' tall with 1' of the wire folded toward the inside and lying on top of the ground. I then covered these structures with chicken wire and weighted this "top" with a 10' section of PVC pipe on each end. This gave me easy access to the interior for moving the boxes, feeders, water containers and for weighing the rabbits.

Pen 1 of 10 does had pelleted feed available and Pen 2 of 10 similar does had no feed available. Both pens were grazing in the same general area. In individual pens in the barn, an additional 10 does of similar age and breed were used as the control group. I weighed the rabbits periodically to ensure there was no unreasonable weight change.

My farm dogs became a part of the project. Because the pasture is so close to my house, my dogs prevented predation. They, however, would become predators if this farmer wasn't quick enough.

Results:

The does initiated in some fighting and claiming of boxes. The first couple of days there were some skirmishes, but then they seemed to settle in fine. As a matter of fact, 3 or 4 does would lay in the same box, in the heat, all packed in together like sardines, even though there were plenty of other boxes available. Another oddity, I had placed plastic square buckets, wooden nesting boxes, and 2 old metal boxes in the pasture. The does definitely preferred the metal boxes, perhaps because they are open in the bottom, unlike the others, and they could lay on the ground rather than on the plastic or wood.

The very first night, it rained. Those does just sat there. I had covered ½ of the area with a tarp for shade and protection from the rain, and plenty of boxes were available, but they just didn't seem to know what to do. So, I covered the entire area with a tarp and clamped this tarp to the chicken wire top of the cages; this way I still had easy access. After a few weeks, they learned to take cover from the weather. I had to adjust my outdoor cages again by adding a prop to form a peak at the center of the cage to allow for water drainage.

With 10 does grazing, I quickly found that this outdoor cage had to be moved every other day. With 5 does grazing this 100 sq ft of grass, the cage needed to be moved twice a week. Each doe needs about 10 sq ft of good grass per day.

Initially, the rabbits looked thinner, but maintained healthy weights. I believe they were adjusting to the increase in physical exercise. In the second week, I found a dead rabbit in Pen 2 – no supplemented feed. This doe had dug a ditch in the pen 8 feet long and the ditch got deeper as it got longer and the doe was dead at the deep end of this trench. 2

days later, another died unexpectedly. I checked the bodies of each for signs of diarrhea, injury, etc. The only symptom I found was the second had blood in its nose. At this point, I abandoned the unsupplemented part of the project and split the remaining 18 does between the 2 pens and gave each supplemental feed pellets. From then on, the only losses suffered were by escapees (this farmer was too slow.) Most escapes happened when I was moving the pen. This proves to me that my pen needs some perfecting. I quickly learned to keep a live trap set, and actually, they were just trying to get to the taller grass. With a little coaxing, I could raise the corner of the pen and they would come back in. Just curious, I guess.

In July, since I had 2 pens of supplemented does, I decided to try a different area of pasture. I left Pen 1 in the white clover and shorter grasses and moved Pen 2 to taller grasses with a lot of weeds. Pen 2 does seemed to enjoy the 1 ½' tall grass, playing and hiding, and they were a lot of broad leaf weeds available like plantain and dandelion. But then the amount of feed required increased and 2 does died. So, I moved it back to the better pasture.

Two does were bred in Pen 1. The first threw 6 live kits, which is the average litter size for my rabbitry. Five died within the first day when they crawled out of the pen into the sun. The remaining kit lived 5 days on the ground covered by the metal box. It died the day after I moved the pen and my disturbance may have caused that.

Then, one of the does dug this very deep hole in the ground. I can't reach the back of the hole, it must be 4 ft deep. I moved the pen on the regular schedule, away from the hole, and the next day she threw 8 live kits, on the ground. Again, my fault. I moved the kits into the metal box with no bottom and within a week, all died. A doe in the control group also through a litter of 5 kits and all died the first day. More study needs to be done in this area. My findings are indicative of normal litter sizes, but expectant does may need to be removed from the pasture for better housing purposes.

Soil Tests:

Soil tests samples were gathered from the grazing plot before and after rotational grazing. The soil in my area is traditionally very acidic (red clay). The changes on the soil tests tend to show a small increase in soil nutrients. However, more data needs to be taken to consider seasonal effects. The following table represents a summary from soil test reports conducted by West Virginia University Soil Testing Laboratory.

LBS/ACRE	BEFORE – 4/1/04	AFTER - 9/30/04
PH	6.6	6.9
P	125	157
K	375	480
CA	6143	7661
MG	1042	1895
AVAILABLE		

(MEQ/100 G)		
K	.5	.6
CA	15.4	19.2
MG	4.3	7.9
H	0	0
CEC&BS	20	28

Alternatives:

Another farmer liked my ideas and pastured some of his rabbits with his on style. He built a moveable outdoor pen also; but, he built it with ½” and ¾” PVC pipe in the shape of a small hoop house. He wired the chicken-wire to the PVC frame 3’ high with 1’ folded in, and put the tarp over the remaining rounded top. It is 10’ long and about 6’ wide. He, too, found that 10 sq. ft per doe per day was required. His pen, however, was easier for one person to move—it seemed sturdier. His problem arose when the does began to climb the chicken wire and get out. We hadn’t considered the climbing factor!

Results:

The greatest advantage to pasturing some of the does, was not feed cost reduction as expected, but time savings. Although, feed costs were reduced by approximately 2/3 during the summer months when good pasture was available, the relief from daily feeding and watering was more welcoming. The pastured does consumed 80% less water than the control group of does maintained in cages in the barn. I could feed and water 10 does at a time as a group. What a relief.

Conditions:

The grass lot that I used for grazing was very healthy and we had a mild summer with good rain. The tarp over the pens provided shade as well as protection from the rain. Because the pens were moved twice a week, good fresh grasses were consistently available.

Economics:

The costs of the pens included:

Materials	Cost
80’ Rabbit Fence 48”	\$86.80
16-10’ section 1 ¼” PVC Pipe	\$31.36
PVC Fittings	\$18.56
tarp, clips, auto waterer	\$17.32
Total	\$155.10

Savings:

Feed:

Approx. Feed Ratio	Caged	Grazed	Savings
20 Does @ week	75 lbs	25 lbs	50 lbs
x 25 weeks			1250 lbs @ \$419.50

I pay \$8.78 for 50 lb of rabbit feed for a total savings of \$419.50.

Time: I immediately saved 45 minutes every day because I didn't have to fill 20 water bottles. Time normally spent cleaning cages and shoveling the barn was partially offset by the time spent moving the pens, so I added an additional savings of 2 hours a week. Total time saved for 6 months was about 120 hours.

Assessment:

The greatest threat to the safety of the animals was the pen structure. It needs to be sturdier. This would also help one person move the pen and all the boxes. Perhaps a pen sturdy enough to support the boxes would be better. Moving the pen, with the rabbits in it and all the boxes, waterer and feeder was difficult for one person, but manageable. The one-foot section of fencing folded under towards the inside of the pen was key. I did not pay the extra money for apron fencing but used galvanized rabbit fencing and bent it along a 2' x 4' board to form the apron.

Burrowing was not a problem for me. However, I moved the pens a couple times a week, so they didn't really have time to burrow far, except the ones mentioned previously. Also, predation was not an issue. My farm dog kept the predators out and the rabbits in, for the most part.

Adoption:

I absolutely recommend pasturing rabbits whenever possible. I have pastured rabbits with supplemental feed pellets for 6 months now. They are healthy, cheaper and I'm not nearly as tired. It works.

Outreach:

My outreach includes this report and I have shared my experience with other rabbit farmers and some are attempting to pasture their rabbits. Also, this report will be posted to the WVU SARE website.

Report Summary:

Rotationally grazing rabbits during the off-season reduced my profit loss considerably. The supplemented rabbits LOVE it. They are so healthy! They are more muscular and

their coats are beautiful. Each doe requires 10 sq ft of good pasture per day. Pastured does consumed on average 2/3 less feed and nearly 80% less water than the control group. But the biggest savings by far, was my time. Feeding and watering a group of rabbits is a lot easier and quicker than feeding and watering individuals. I moved the pen, filled the automatic waterer, and laid a partially filled bucket of feed on its side under the tarp and walked away for 2 or 3 days.