

Rabbit Kindling Tractors

Effects on kit health and efficacy of breeding on pasture at Rebop Farm

Proposal: Using a kindling tractor for rabbit breeding stock to birth and nurse on pasture will improve overall kit health, and reduce health issues related to confinement.

Construction

We adapted the 5.5x10 ft. poultry tractor plans from Farm Marketing Solutions; we like the lightweight construction, as well as the ability to easily walk inside. We felt this characteristic was especially crucial for breeding and kit care duties.

We added two banks of wooden framing, enclosed with 1" chicken wire on sides, and ¼" welded wire on a re-enforced cage bottom, as well as two inches up the side to protect from kits crawling out of the tractor, or getting stuck. We also added wooden platforms to keep rabbits from developing sores from extended contact with wire. Cages were divided in the middle, giving each rabbit 8 square ft of floor space. Cages were not given tops, in order to reduce overall weight and ease access for working with the animals. The tractor is externally secure and has an exterior door; it is also covered by a lightweight tarp to protect from the elements. Wheels were initially plastic 9"; they were replaced with bicycle wheels due to difficulty moving the tractor.

Individual feeders were installed in the interior of the tractor; top-fill waterers were attached to the exterior, to improve watering efficiency.



Implementation

We introduced does bred in the same cycle to the tractor on May 25th, 2019. We picked tractor rabbits randomly from our breeding does: N2, O1, B3 and I3 were chosen.

The tractor was moved once a day, due to low

initial stocking density. Nesting boxes were introduced at day 28 after breeding, in the interior corner of each paddock.



Results

- Three out of four breeding rabbits (N2, B3, I3) kindled June 21-23, in the first round of breeding, with litter sizes ranging from 2-12 kits. The remaining rabbit, O1, successfully kindled and raised 9 kits on a second breeding. The first three to kindle were not successful in delivering live litters on a second breeding, giving us a 50% rearing rate, with an average live litter size of 8 kits. The success rate in caged rabbits was 41%, with average live litter size of 5 kits.
- All kits born live on pasture were raised successfully, despite concerns about elevated stress in does from stimulus exposure
- No conjunctivitis or eye issue was recorded in any kits born in tractors; however, eye issues did not occur in control rabbits born in confinement.
- Outside of the scope of the grant proposal: kits born on pasture and kits born on wire struggled with coccidia at similar rates once they were put into a grower tractor.



Challenges

- Tractor outfitted with separate nest boxes, water, and feeder for each rabbit is heavy; wire lined bottom has a tendency to drag in tall grass or on uneven ground; difficult to move uphill with one person.
- Rabbit does housed outdoors developed ear mites for the first time ever in our flock.
- Conventional issues with pasturing animals; increased risk of predation, stress from increased exposure to environmental stimuli.

Conclusions

Rabbits were better at birthing live kits, and were able to support and raise larger litters, when raised on pasture. Eye issues were nonexistent on pasture. Other health issues (like coccidia in kits on wet grass) were the same, or increased.