

Creating a Closed Flock

When it comes to raising animals it is best to create a closed herd or flock to avoid introducing diseases from the outside. Regenerative agriculture farmers seek to not only increase the number of animals but to also build a stronger, healthier, and more independent herd which can also be achieved with a closed flock. To ensure the flock has the best gene pool the animals with the best and strongest genes are used for breeding and the weaker animals are eliminated from the breeding rotation and usually processed for meat. For many this idea seems cruel and harsh but if the goal is to improve the herd then eliminating genetic weakness is important. In nature it is the survival of the fittest and the weakest animal usually does not make it. The question is: is it possible to create a 100 percent closed flock of sheep? (it is not possible to create a completely closed flock of sheep without inbreeding)

The main purpose of having a closed flock is to limit or eliminate the risk of exposing the flock to diseases that come from other farms where the same standards for animal health may not be upheld. It is quite easy to have the ewes be closed but breeding with a ram from another farm risks exposing the ewes to diseases. Having a closed flock would also give more control in selecting a ram that is genetically superior because the stock it comes from is known while buying a ram from an outside source can have risks unless the owner of the ram is well known and trustworthy. There are many advantages but the disadvantages including the difficulty of diversifying the gene pool to avoid inbreeding. For many the advantages outweigh the disadvantages and they learn how to manage inbreeding in the flock. The health of a flock relies so much on a healthy gene pool and when the gene pool contains so many homozygous genes there are bound to be major issues. There is a 50/50 chance that a lamb can come out without any problems when the parents are related but there is also the other 50 percent that cannot be

ignored. The chance is high that the lamb will end up having severe problems that will need to be addressed and will cause a large loss of invested time and money. Inbreeding is a coin toss and without knowledge or care brings with it high risk of loss that should be considered greatly.

Based on research there is no way to be a 100 percent closed flock without flock experiencing inbreeding. There are a few ways that inbreeding can be managed but those that claim to be a closed flock are in fact bringing in a new ram every two to three years for breeding. Diversifying the gene pool is very important and does eliminate the risk of major deformities and issues that result from inbreeding. The best method to obtain as much of a closed flock as possible is by creating two lines within the flock that can be crossed for breeding. Two lines of genetics are formed by splitting the ewes in half and breeding one ram to one half and another ram to the other half. This way of breeding does work but the downside is that eventually a new ram will have to be introduced once the flock reaches a certain size and all the sheep are related. There is also the possibility of utilizing AI from a creditable supplier but this option is expensive and runs the risk of not being successful if any of the ewes do not take to the AI. Inbreeding will result in the offspring having the worst traits from the parents. The lambs growth rate and productivity will significantly decrease resulting in financial loss for the owner. Inbreeding can also result in more noticeable deformities that can include an extra leg, disproportionate legs, infertility, spider lamb syndrome, inbreeding depression, and deformed spines.

In conclusion, having a closed flock is obtainable but not in the way that some may think. It is not realistic to think that anyone can keep their flock from being exposed to diseases from outside animals. New rams must be brought in every 2-3 years to ensure the health of a flock but even by bringing in a new ram every once in a while a partly closed flock can be achieved.

Inbreeding is a very technical thing to understand but being aware of all the advantages, disadvantages, and how to manage inbreeding in one's flock is very wise.

Dittmar Family Farm:

The Dittmar Family Farm is a small regenerative farm where the main focus is growing and supplying vegetables to the community through CSA, restaurants, and farmers markets. Zach and Jenny also understand the importance of implementing animals into the mix of what they are doing. They recognize that soil health can only be achieved when animals are involved. The farm was started initially to help their own family eat healthier and more seasonally and then the farm began to grow as they saw the same need in their community. Zach and Jenny value regenerative farming practices and they try to keep to no till farming as possible.

My role on the farm this past summer was as an observer, worker, and helper. They treated me as a full time employee and when they gave me a task to do they took the time to walk me through in detail how they wanted something done and the reasoning behind it. I went with Zach to run errands and was able to ask questions about farming and ask more about how they run their farm. The specific tasks I did this summer were helping with planting, caring for and harvesting all the varieties of vegetables they grow, tilling the fields, preparing raised beds, pruning and trellising tomatoes and cucumbers, mowing, rotating cows and sheep to different pastures. I learned about managing herd health, washing and packaging produce for market days, and finally I helped with weeding. I am very thankful for the experience of working on this farm. I have learned so much and I am excited to be able to apply all I have learned in the future.

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