Reduction of Internal Parasites Through Improved Feeder Design

Hefty, Matthias (School: DeKalb High School)

I raise commercial boer goats, and the last two years I have had to worm my herd twice as much as normal which had become expensive, time consuming, and had an impact on overall herd health. This led to the purpose of my experiment which is to design a goat feeder that can easily remove the manure from the feed tray. By doing this it can reduce the reoccurring worm problems that are caused from the goats digesting the manure that contains worms and their eggs. The method of this project starts with an existing self made feeder design already on my farm. I removed multiple pieces of the feeder to get to the base where the tray lays. I reconfigured the tray so that it could slide easily in and out of the feeder to remove the waste. This involved cutting and drilling the tray and also adding other pieces of wood to the feeder to make this possible The results showed that through my improved feeder design of the Premier1 design I could save 23 seconds of cleaning per 8 linear feet since it usually takes 25 seconds. If goat farmers were to clean the feeders without the retractable design it would cost $13,841,099.30 to clean. If the retractable tray feeder design is used it would only cost $1,108,008.60 to clean all the feeders. By preventing the reoccurring worm problem it saves $5.28 per goat by not having to treat them four extra times a year. In conclusion, it can save $12,733,090.70 in one year by reducing the time to clean which reduces reoccurring worm problems. Also, with all the millions of pounds of goat meat that is imported into the United State this is a great opportunity for goat farmers to commercialize their herds through the huge savings by the design.

Awards Won: