

Ewe Bet Ranch LLC

Colorado School of Mines Documentation Process

Jeff Beemer – Owner

### Purpose

Objective for this project is to design and implement a data system that reinvents Software we have used on the Ewe Bet Ranch. The software is used to record and track information of the sheep we raise at the Ewe Bet Ranch. We have histories and data for 30 years of sheep we have owned. My request is for the CSM students to work with me to review an existing software/database and invent a new and more robust application that can be used track our sheep. I need the new application to work on a PC and not be used to distribute data from my flock to other sheep owners.

The software we currently use was purchased 20+ years ago and is secured by a hardware key. We actually worked often with the owners/developers of the software to help them enhance the system. Tragically the developer died unexpectedly and the owner suffered a medical issue that rendered him unable to continue the company. The current software is solid and operational but it exists on a laptop that is old and will eventually stop working. We will then be out of luck and not have an operational system. An overriding goal is to have a new software solution that could take existing and new data to a new software solution that will be supportable and operational in the future.

### Types of data required in the database

We have a very wide range of data in our current database. Different types of data are captured and documented for each animal. Following is a breakdown categories used in our tracking system.

- A. Ewe Bet Ranch specifics
- B. Animal Information
  - a. Animal History and Genetics
  - b. Registration Documentation
  - c. Ear tag history and replacements
  - d. USDA markings on tags
  - e. Flock Number – COWE11 on each tag for our flock Identity
  - f. History on Linage
  - g. Ability to sort or eliminate unrelated sheep
  - h. Vaccination history (leverage Batch history or Separate vaccinations)

- i. Customizable fields (New fields or History fields)
- C. Breeding Characteristics
  - a. Confirmation
  - b. Leg straightness
  - c. Belly wool score. 1 – Low, 2 – Medium, 3 – High
  - d. Fleece quality
  - e. Wool length at annual shearing
  - f. Ram history and times each ewe used the same or new rams
  - g. Productivity on Singles and Twins
  - h. Hoof trimming schedule each year
  - i. Codon
- D. Lambing History
  - a. Previous lamb births
  - b. Quality of lambs produced
  - c. % of lambs registered or sold to customers
  - d. Lambing ultrasound history and results
  - e. Predicting lambing timing based on relevant data collected
  - f. Temperament
- E. Face Quality and Clarity
  - a. Open or closed face wool. 1 – open, 2 – slight wool coverage, 3 – 75% face covered with wool, 4 – Wool covering face
  - b. Tinting on eye lids (clear or colored)
  - c. Matching jaw composure. 1 – Perfect, 2 – Overbite, 3 - Underbite
- F. Farm maintenance requirements
  - a. Summer Feed (Pasture grass)
  - b. Grazing timing and rotations
  - c. Winter Feed (Alfalfa)
  - d. Grains used for feeding, source, contents, healthiness, how much, ...
  - e. Clean sheep water supply throughout the year.
  - f. Maintenance of water tanks, cleanliness, heating requirements, structure, ...
  - g. Feed and water usage based on weather constraints and forecasts
  - h. Pasture irrigation supply, timing, quantity, value, ...
  - i. Farm action dates and timing (shearing, crop fertilization)
- G. Financial Information
  - a. Cost or vaccines out of the bottle and for how many sheep were vaccinated
  - b. Amortizing vaccination costs across the sheep flock
  - c. Cost for labor used to vaccinate the sheep flock
  - d. Sales marketing data, predicted sales
  - e. Pricing of animals sold based on age, quantity, breed, etc.
  - f. Farm sales vs commercial sales
- H. Photos or Pictures of each animal

- a. 3 quality photos per animal
- I. Related Sheep and Flock History
  - a. Length of time to keep an individual ewe in productivity (age, effectiveness, lamb quality, pregnancy rate, ...)
  - b. Ram productivity (effectiveness, number of ewes bred, quality of lambs, length of breeding life, ...)
  - c. Breeding dates to satisfy various holidays in a lunar or solar year.
  - d. Specialized customer groups by religion, ethnical groups, locality in the world. Modify dates that change each year based on religious holidays.
- J. Sheep and Flock Sales History
  - a. Lambs sold yearly
  - b. Ewes sold yearly
  - c. Rams sold yearly
  - d. Annual wool shearing history
  - e. Butcher lamb schedules
  - f. Breeding livestock sold to customers
- K. Sheep Database
  - a. Robustness
  - b. Ability to add or eliminate features
  - c. Stability of data base
  - d. Programing flexibility by data base owner
  - e. Output files for different customers (csv, excel, qtx, ...)
- L. Vaccination History
  - a. Types of Vaccinations used annual
  - b. Specialty vaccinations and for what purposes
  - c. FAMANCHA scores by animal
  - d. CIDRS
  - e. FEC
  - f. Deworming procedures
  - g. Coccidiosis
  - h. Medications (Label, Lot, Expiration, Dosage, Date used, ...)
  - i. Injection process (SQ, IM, IV, Oral, Rectal, other)
- M. Wool Quality and Scoring
  - a. Fleece quality
  - b. Diameter of wool
  - c. Fleece yield by pound ...
  - d. Cleanliness and cleaning required
  - e. Uses of wool (Raw fleeces, Cleaned fleeces, Carded, Roving, Spun Yarn, ...)

Types of data not desired or retained in the database

1. Milk Appraisal

2. Milk DHIA
3. Milk Production for consumers