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Relational Databases – Continued Assesment 1

Design Document for a Beef Farm Database

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Business Description

Business Details:

A beef farm needs to record information on livestock, their feed, the agrochemicals that are used throughout the year and the medicine given to stock. This includes keeping record of cattle’s tag number, information on the current and previous owner, their most recent TB test, the herd number of the herd they are currently in, and the animal’s gender and breed. Only cattle are kept on the farm so there is no need to account for other animals.

The fields used for forage, the cereals they are fed such as meal cubes and barley, and the forage cut from the grass that is fed as silage and hay must also be recorded. The soil quality and ph-levels of the fields are frequently tested. Each field has a unique number, and some fields are divided into plots which have a unique number assigned also.

The weight and cost of the cereals when bought is to be recorded as well as the batch number and date of purchase. The cut number of the forage as well as the number of bales that are produced also needs to be recorded.

Fertiliser and pesticides are both used on the fields and plots throughout the year. The information to be recorded on fertiliser is as follows: date spread, operator pu number, cost, kilos/acre used, fertiliser type and chemical units of the fertiliser. For pesticides, the date spread, cost, kilos/acre used, operator pu number, CAS number, and name of the pesticide are to be recorded.

The cattle are given vaccinations and are dosed for sicknesses throughout the year. The medication’s batch number, date bought, expiry date, method of application, dosage, cost, and withdrawal period must be recorded.

Business Rules

Structural Business Rules

* Multiple fields can be used for multiple cuts of forage.
* Fertiliser and Pesticides are both agrochemicals that will be spread on fields throughout the year.
* Forage can be stored for future use or fed to cattle.
* Cereals are only used to feed cattle and will all be used at a certain point.
* All cattle will eat forage in winter, but not all will be fed cereals.
* At some point, all medicine will be administered to the cattle. However, not all cattle will receive every single type of medicine that is bought.
* Agrochemicals are bought, stored, and then used in the future.

Procedural Business Rules

* There must be grass fields in the database for forage to be created.
* There must be agrochemicals and fields recorded for agrochemical usage to be recorded.
* Some am

EER Diagram

