



- In 2018 NZ's venison export value was \$198 million

- 413,416 hinds mated in the year ending September 2018

- Top 3 markets for exporting venison are 1) USA, 2) Germany and 3) Belgium and the Netherlands



KEY CASE STUDY

DINZ WEB BASED APP

SOFTWARE / APP DEVELOPMENT

The large-scale commercial farming of deer started in New Zealand, and New Zealand remains the world's largest and most advanced deer farming industry. In 2018 NZ's venison export value was \$198 million, with 892,931 deers farmed. The deer industry is coordinated and monitored by Deer Industry New Zealand (DINZ), responsible for promotion and development.

Passion to profit is a joint venture featuring NZ's 5 major venison marketing companies working together to transform the NZ venison industry. This initiative from DINZ aims to increase profitability and match consumer demand to appropriate markets. The 7-year programme aims to diversify the consumer base, introducing a bold strategy of supplying chilled, luxury, venison all year round to international markets. The programme also seeks to help farmers respond to market demands and maximise reproduction rates.

AbacusBio consultant Jason Archer and alongside IT consultant Mark Teviotdale created a web based app for DINZ's P2P. This app supported deer farmers to set and monitor the live weights of replacement hinds with the objective of improving R2 hind fertility. Low reproduction rates in poorly grown rising 2-year-old (R2) hinds are a lost opportunity for farmers, hence the app has been designed to maximise reproduction rates.

Bodyweight is widely known to influence the pregnancy rates of R2 hinds. R2 hinds have to reach target liveweights to enter puberty and start cycling.

Using curves relating pregnancy to body weight at mating (based on data from over 20,000 R2 hinds), the app can calculate mating liveweight targets for replacement hinds. Target mob averages can be adjusted to achieve the desired conception rates. Based on the growth curves generated for mating targets, farmers could then customise the curves based on their varying needs.

These growth curves provide predictions of growth to better meet target liveweights for young deer," stated Jason. The tool also allows mob average weights to be plotted on the predicted growth path needed to achieve pre-set pregnancy rates - so that farmers can check to see that they are on track to achieve targets. Printed versions of the curves can also be downloaded.

This tool was initially developed as an MS Excel spreadsheet, but once the concept was developed it became obvious that it was much better to deliver it as a web-based tool. By hooking a sophisticated statistical programming language into a web interface, a whole new set of possibilities were created.

AbacusBio remains keen to explore working with clients to create new tools for their business and customers. Creating anything from simple calculators to sophisticated systems based on live data. The tool can be accessed from the Deer Industry New Zealand's "Deer Hub" at www.deernz.org.nz.