

Sheltered upbringing brings gains

The days following birth can be a stressful time for a young fawn. In the wild, this is when predators are on the prowl. The fawn ensures its survival by hiding, a behaviour it does not lose when farmed. Can shelter reduce stress and loss of life, and give the fawn a good start in life which shows up in later production performance? University of Waikato masters student Bethany Hodgetts carried out a study at AgResearch Ruakura to find out whether fawns would benefit from the use of artificial shelters.

FAWNS WILL readily seek out and make use of artificial shelters when they are made available in the paddock, according to an AgResearch Ruakura study.



A fawn seeking shade in one of the shelters provided by Ruakura researchers

In research investigating the effectiveness of different types of artificial shelter, Red deer fawns at Ruakura's deer unit were seen to lie

in shelters for almost half the day.

In the wild, Red deer fawns lie separated from their mothers for 7-10 days after birth. During this time they are usually concealed by vegetation or the surrounding landscape.

This behaviour may serve to protect the vulnerable young deer from predators, and may also help them to conserve energy and water.

Even when predators are uncommon — as on New Zealand farms — fawns will still hide in sheltered bedsites when they are available. Although many deer farmers allow the grass to grow in fawning paddocks, most New Zealand farms lack trees or tall vegetation, and this may be stressful for fawns trying to hide.

Shelters

Fawns may even go through fences in search of sheltered areas. Therefore, we conducted an experiment to investigate if newborn Red deer fawns would use artificial shelter.

To test if a certain shape was preferred, shelters of various types were made available.

Sixteen artificial shelters, consisting of a metal frame and shade cloth supported by chicken wire, were placed in a paddock grazed by 19 pregnant hinds.

The use of shelter by fawns from the time of birth was recorded every 30 minutes during the day, for 40 days from the birth of the first animal.

Like their feral counterparts, domesticated fawns appeared to use the shelters for hiding in.

Shelters were used infrequently on the first day of the fawn's life, but their use increased rapidly as the fawns grew older and became familiar with the structures.

Shelters were also used to gain shade from the sun, which may be important in protecting fawns from heat stress during the summer months.

As the daily maximum temperature increased, shelters were used by fawns more often.

The fawns seemed to prefer shelters with a roof and wall, as compared to those with just a wall.

We know that deer in the wild prefer areas which allow them to hide from view but also see out in one direction, and the shelters used in this study provided these features.

While the fawns spent a considerable amount of time lying in shelters, artificial shelter may not be as attractive to deer as natural shelter, such as trees or shrubs.

These factors would need to be considered by farmers when decid-

ing which type of shelter to use.

A second study looked at how shelter might reduce weaning stress in fawns. However, it was found that on average, shelter was used relatively infrequently by weaners — for only about 15 per cent of the day.

Weaning

The stress of weaning and the age of these animals may explain the decrease in use at weaning, and the shelters did not appear to assist animals to settle more quickly at this time, as measured by the time

the weaners spent pacing fences.

However, shelter use did increase as the time from weaning increased, suggesting that as the deer became more used to their new situation — without their mothers — they used shelter more.

Findings from this study suggest that newborn fawns would benefit from the provision of shelter, which may also reduce the incidence of fawns becoming separated from their mothers when they go searching for shelter on the other side of the fence.