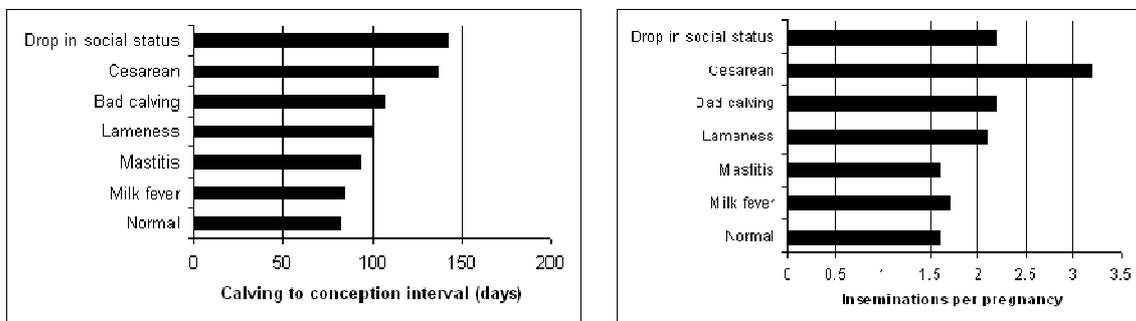


## Effect of Stress on Dairy Cows

At this time of year I often get asked for explanations as to why cows or heifers might be empty, despite what most would consider normal management. While there is no simple answer that fits all situations, it is well worth considering the effect that stress has on the fertility of cows. The first thing to do is identify what sort of stressors that your cows are exposed to. The most obvious that we are all aware of under a pastoral system is nutritional stress. The quantity and quality of pasture varies greatly during the year, having a significant impact on milk production, body condition and fertility. The other types of stress that we don't give enough attention to are health related. Conditions such as mastitis, lameness, calving problems and retained membranes can all affect the fertility of cows. The following figures come from a UK study and show the influence of treated clinical conditions on calving to conception and inseminations per pregnancy compared to normal herd-mates



From: Dobson, H, and Esslemont R.J. "Stress and Its Effects on Fertility of the Dairy Cow". WCDS Proceedings 2002.

Retained membranes are likely to predispose the cow to having a uterine infection. Cows with a pus discharge take an extra 15 days to conceive. Cows that have a difficult/bad calving take an extra 8 days to resume ovarian activity and take 23 days longer to conceive than normal herd-mates. Compared with normal herd-mates, cows that suffer from lameness can take 100 days longer to become pregnant, have lower first insemination pregnancy rates and require more inseminations per pregnancy.

An interesting component of the study covered above is the effect of change in social status on fertility. Take the situation in NZ when heifers join the herd during the dry period, and again at calving time when they join the milking herd. In each situation they have to learn the social hierarchy of the herd. As calving progresses there will be constant changes in social structure as various cows calve. Also consider the situation if you split herds prior to mating (e.g. to get a once a day mob or separate young and old cows). Each time a new social structure will emerge. The table below summarises fertility data for 45 pairs of cows that either increased or decreased in social status during the breeding period in three UK commercial dairy farms.

	Change in social status	
	Increase	Decrease
<b>Calving to conception (days)</b>	97	143
<b>Inseminations per conception</b>	1.6	2.2

From : Dobson H and Smith RF (2000) Animal Reproduction Science 60-61: 743-752

We know that stress is causing losses in your cows, and costing you money, so what can we do to minimise it? The main focus has to be on prevention. For each of the stressors identified above, there are simple steps that can be taken to minimise their impact. Keeping accurate records of the incidence of the main stress related diseases on each farm will help identify the areas you may need to focus on. But don't stress yourself (it may affect your fertility!). Your vet should be able to help you formulate management strategies for the majority of these issues.