

The importance of AI Technique

Successful artificial insemination technique is crucial to attaining pregnancies. This becomes increasingly important when inseminating ABS Sexation, as the extra processes required to sex semen means that the final product is more 'fragile'.

There is an increasing amount of data to suggest that a qualified AI technician, inseminating cows on a routine basis, has a greater chance of getting cows pregnant than a DIY inseminator.

The problems associated with poor conception rates of sexed semen are well publicised. That is why we believe, that with both pregnancies and such valuable semen at stake, we **strongly recommend** that ABS Sexation is inseminated by a qualified Genus ABS technician.

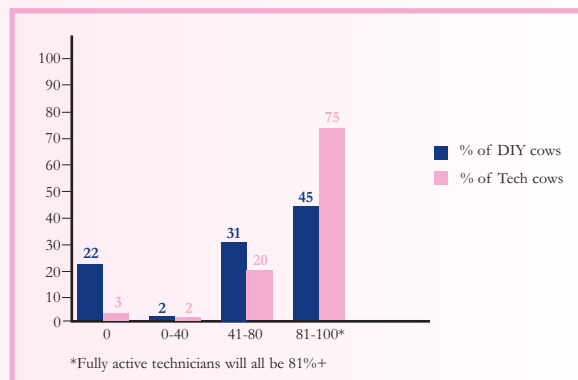
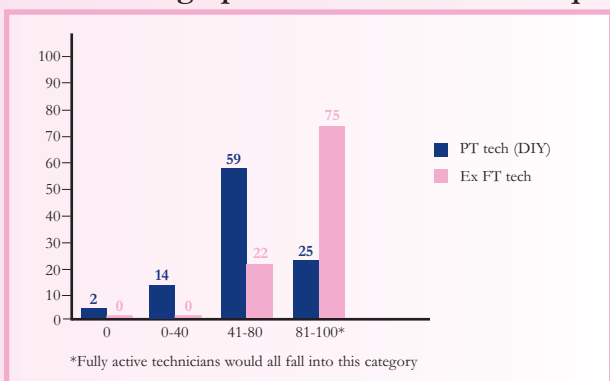
Impact of insemination technique

(Genus ABS Trial, 2000)

Objective data on the ability of existing full and part-time (DIY) inseminators can be found by analysing results of slaughterhouse DIY refresher courses. All participants on this course were actively inseminating cows.

- 1,152 inseminations were given a score for the placement within the uterus (0 - 100%).
- Genus ABS trained ex-inseminators performed 454 inseminations on the same course for re-employment - not active inseminators.
- They were overseen by three technical supervisors with over 100 years experience in AI.

Losses through poor insemination technique



- Only 25 % of part-time technicians (DIY), were able to match the accuracy of full-time technicians.
- Genus ABS Technicians serve over 4,000 cows a year throughout the entire year and are monitored for insemination accuracy.
- Only 45% of cows serviced by DIY get inseminated properly.
- A staggering 22% of cows serviced by DIY do not get the semen placed in the uterus - no chance of pregnancy and wasted semen cost.

UK farm results

(Genus ABS data analysis, 2001)

- NMR supplied data for 2,200 members of the Genus ABS Breeding Club, including herd yield and calving interval.
- Genus ABS added details on DIY or technician service herd.

Table 1: Difference between DIY and Tech service herds

	Calving Interval (days)	Difference
Average Tech serviced herd	397	
Average DIY serviced herd	401	4
Bottom 25%DIY herds	428	31

- The difference is due to differences in inseminator technique, not surprising when you consider each full time technician carries out 4,000 to 10,000 services per year.

Each additional day open costs £3 per cow, thus 25% of DIY customers lose 31 days calving interval versus the average technician herd, equivalent to £10k per 100 cows.

Table 2: Differences in calving interval by milk yield

Number of herds	Milk yield (kg)	Calving interval DIY (d)	Calving interval TEC (d)	Difference in calving interval (d)
220	5-6000	400.5	397.4	3.1
746	6-7000	399.6	397.5	2.1
785	7-8000	400.5	397.0	3.5
442	8000+	403.9	398.9	5.0

- On average the calving interval is longer at all yield levels in DIY herds.
- At the 8-9,000 kg milk yield level an extended calving interval in DIY herds cost £1,560 for a 100 cow herd.

Results in Australian dairy herds

(In calf project, 2001)

- 100 inseminations were carried out in each herd by a professional technician.
- Conception results of these inseminations were compared to the results of the usual DIY technicians in the herd.

Table 3: Conception rates achieved by DIY and professional technicians

	Number of inseminations	First insemination conception rate
Professional technicians	16687	49%
DIY technicians	9829	45%

- The average conception rate achieved by DIY operators was 6% lower than that obtained by professionals.
- It was found that at least 10% of DIY technicians achieved conception rates between 12% and 36% less than the professional technicians in these herds.

Fertility in NI dairy herds

(NI data, July 2006)

- Six herds were selected.
- Herd size varied from 72 to 214 cows.
- Farmers were asked to carry out DIY AI and Technician AI on alternate days.

Table 4: Fertility performance, based on confirmed calvings, comparing DIY AI and Tech AI in six commercial dairy herds in NI

Herd	No. of DIY AI	No. preg. by DIY AI	% preg. by DIY AI	No. of Tech AI	No. preg. by Tech AI	% preg. by Tech AI
1	8	2	25.0	9	7	77.8
2	123	61	49.6	74	33	44.6
3	10	0	0.00	1	0	0.00
4	76	18	23.7	28	11	39.3
5	53	23	43.4	33	17	51.5
6	56	6	10.7	49	11	22.4
Total	326	110	33.7	194	79	40.7
Excl. herd 2	203	49	24.1	120	46	38.3

Note - herd 2 was removed as it was a seasonal calving herd, and was thought to distort the results

- The number of pregnant cows achieved by the technician was 14.2% more than that achieved by the DIY inseminator.
- Performing inseminations into a relatively small number of cows over a given time period is thought to lead to a fall in skill level and confidence.

In summary...

- Successful AI technique is crucial to attaining pregnancies.
- This is increasingly important when inseminating ABS Sexation.
- Qualified AI technicians perform a high number of inseminations each year and are regularly monitored and re-trained.
- Various data sources suggest AI technicians can improve conception rates by 4-36%.
- We **strongly advise** that ABS Sexation is inseminated by a Genus ABS qualified technician.