





Herd Fertility – All year calving

Practice Audit

This **introductory checklist** is designed to assess performance and practices in **key herd fertility management areas**.

	Target	Observed/ Measured	Best practice	Change?			When can I change?	
				Yes	Need to review	No Not right for my business	Now	Later
Calf and heifer management	Heifer liveweight at first calving: >90% of mature cow liveweight		<ul style="list-style-type: none"> Heifer liveweights are measured and comparing with set targets 					
Cow body condition and nutrition	Herd avg. BCS at calving: 4.5-5.5 <15% cows below 4.5 and <15% above 5.5. < 0.6 herd avg. BCS loss, calving to mating		<ul style="list-style-type: none"> You are using appropriate feeding or other strategies after calving and through early lactation to avoid excessive loss of body condition 					
Heat detection	<i>Y-R calving herds:</i> 80-day submission rate: 73% <i>Seasonal/split calving herds:</i> 3-week submission rate: 86%		<ul style="list-style-type: none"> All farm team members involved are well trained in detecting heats You use paddock observations in conjunction with heat detection aids such as tail paint and heat mount detectors 					
Sire selection and AI	Sires selected are ranked in the top 50 bulls in Good Bulls Guide Conception rate: 51%		<ul style="list-style-type: none"> Semen storage and handling procedures and insemination technique used by all operators on your farm are maximising conception rates 					
Bull management (if bulls used)	<i>Y-R calving herds:</i> 100-day in-calf rate: 58%		<ul style="list-style-type: none"> You are selecting healthy, fertile, well-grown bulls to run with the herd Enough bulls are available when cows are likely to be on heat 					
Cow health problems around calving	Milk fever: <1% % culls (inc. deaths) in first 60 days of lactation: <6%		<ul style="list-style-type: none"> You are keeping accurate records of the number of cows affected by each type of health problem and comparing them with target levels You have an effective transition cow management program in place You have effective strategies to prevent and treat cow health problems 					
Y-R calving herds: Selecting VWP	Voluntary Waiting Period (VWP): Between 30 and 60 days		<ul style="list-style-type: none"> You have selected an appropriate Voluntary Waiting Period for your herd based on heat detection or conception rates, lactation persistence and other factors 					



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Calf and heifer management	<p>Heifer liveweight at first calving: >90% of mature cow liveweight</p> <p>Heifer age at first calving: 24 months</p> <p>First calver milk production: >90% of mature cows</p> <p>First calvers progressing to second lactation: > 90%</p>		<ul style="list-style-type: none"> Liveweight targets for heifers are set based on farm's target bodyweight and age at first calving Heifers are weighed every 3 months and if average weight is below target immediate action is taken to improve nutrition and ensure good parasite control Diets and feeding program are designed based on each animal's total rearing cost and whole-of-life returns (rather than minimisation of feed cost per animal per day) Feeding program incorporates sound colostrum and milk / CMR management, weaning based on daily intake of starter feed (not age), use of high quality supplementary feeds, an agronomic plan specifically for heifers, and pregnancy testing to determine accurate due calving dates, ensuring each heifer is fed the transition diet for the last 3 weeks before calving 					
Cow body condition and nutrition	<p>BCS at calving: Herd average BCS between 4.5-5.5 < 15% of cows below score 4.5. < 15% of cows above score 5.5.</p> <p>BCS at mating: < 0.6 decrease in average score of the herd since calving</p> <p>BCS at dry-off: Desired BCS at calving Cows maintain or gain body condition during the dry period</p>		<ul style="list-style-type: none"> Cows are body condition scored at drying-off, just before calving and 40-60 days after calving (when eligible for insemination) using separate recording sheets for drying off, calving and pre-mating scoring Excessive body condition loss after calving is avoided through: <ul style="list-style-type: none"> sound transition cow feeding and management pre-calving feeding the highest possible quality pasture/forage to cows after calving and through early lactation Several quick checks are used regularly to identify nutritional problems in the herd before they cause undesired loss of condition and subsequent reduced reproductive performance If BCS results are found to be outside the recommended targets for calving and mating, immediate actions are taken to improve nutrition. Actions are also taken to prevent the problem happening again next year Diets are nutritionally balanced with help from a professional nutrition adviser to ensure they provide adequate supplies of energy, protein, effective fibre, macro minerals, trace minerals and vitamins. Feed additives are used appropriately The costs and benefits of changing diets are analysed with help from a professional nutrition adviser 					

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<p>Heat detection</p>	<p><i>Y-R calving herds:</i> 80-day submission rate: 73%</p> <p><i>Seasonal/split calving herds:</i> 3-week submission rate: 86%</p>	<ul style="list-style-type: none"> • All farm team members involved are well trained to know exactly what to look for when detecting cows on heat • Each cow in the herd has a unique numbered ear tags / freeze brand that enables it to be readily and accurately identified from a distance • Paddock observations are used in conjunction with heat detection aids such as tail paint and heat mount detectors • Heat mount aids are applied as per the manufacturer’s instructions using a recommended adhesive • If an automated heat detection system is used, the alarm threshold is carefully tuned to achieve high heat detection rate and accuracy • A coloured cloth tail tape system is used to help distinguish cows that require a careful look when heat detecting and cows that have been inseminated, but not yet confirmed pregnant • Dates for observed heats between calving and insemination are recorded so staff can anticipate when cows may next be on heat • Cows are not submitted too early, when they are coming on to heat, rather than after standing heat has occurred • Records of past heats are used to help confirm that cows showing weak signs of heat about 3 weeks after a recorded date are actually on heat • Each month, cows calved more than 80 days before that have not been detected on heat are identified and examined and treated by a vet • If several people are involved in heat detection, a system is implemented to ensure that all involved share their records 					
<p>Sire selection and AI</p>	<p>Sires selected are ranked in the top 50 bulls in Good Bulls Guide for index used</p> <p>Sires have at least 105 for Daughter Fertility ABV</p> <p>Non-return rate: >60%</p> <p><i>Y-R calving herds:</i> Conception rate: 51%</p> <p>Difference in CR between AI technicians: <15%</p>	<ul style="list-style-type: none"> • Good Bulls Guide or Good Bulls App is used to choose sires with a breeding index (BPI, HWI or TWI) matched to your herd’s breeding priorities. Only bulls ranked in the top 50 are selected • All cows seen on heat after their Voluntary Waiting Period are inseminated, except cows definitely to be culled and cows where an Ovsynch® program is being used • Safe, comfortable facilities for AI are provided for technicians and cows • If professional AI technicians are used, they are accredited by the National Herd Improvement Association (NHIA), and whose non-return rates are monitored as part of their company’s QA program • If DIY technicians perform most inseminations, the conception rates achieved by those who completed at least 50 inseminations in the herd are compared • InCalf checklists are used to confirm that semen storage practices and insemination technique are satisfactory • Genetic Progress Report is used to monitor the ten-year genetic trends for fertility and other traits in the herd 					

<p>Bull management (if bulls used)</p>	<p><i>Y-R calving herds:</i> 100-day in-calf rate: 58%</p>		<ul style="list-style-type: none"> • Bulls reared on the farm are weighed to ensure they achieve 50% of their mature weight at 14 months, and 85% of it at 2 years of age • If bulls are purchased, they have been weighed to ensure they meet target weight. Ideally they are virgin bulls to reduce risk of introduction of venereal diseases into the herd • Bulls are vaccinated against Vibriosis, drenched and receive the same vaccination program as the heifers and cows • Bulls are grouped well before mating to reduce fighting • Bulls are in BCS 4.5 to 5.5 and fed a diet consistent with the milkers so they will not experience any gut upsets when put with the herd • When choosing, and assigning bulls for work, their genetic merit, age, size, health and breed-related risk of assisted calvings are considered • Only bulls between 15 months of age and 4 years are used • Bulls are tested for pestivirus (also called BVDV), enzootic bovine leucosis (EBL) and other diseases in consultation with a vet • Bulls undergo a Veterinary Bull Breeding Soundness Evaluation (VBBSE) • Bulls are well adjusted to their environment before mating • 1 fertility tested bull per 50 cows is run in year-round calving herds. (Extra bulls are run for short periods if synchrony is used) • At least 2 bulls are run with the herd at all times • Working bulls are regularly rested and provided with ample shade and water during hot weather • Routines are established so the bulls know what to expect and how to behave every day. • Bull management is reviewed if 100-day in-calf rate <58% and if bulls ran with the herd or many cows on heat were mated to bulls 					
<p>Cow health problems around calving</p>	<p>Milk fever: <1% Retained Foetal Membranes (RFMs): <4% Assisted calvings: 2% Displaced Abomasums (Das): <2% Ketosis: <2% Mastitis: <5 cases / 100 cows in first 30 days Grass tetany: 0% Lameness: <2% with greater than Score 2 Acidosis: <1% % culls (inc. deaths) in first 60 days of lactation: <6%</p>		<ul style="list-style-type: none"> • Every case of disease is recorded • Number of cows with each health problem as a percentage of all cows is calculated • Percentages of cows affected is compared to target levels • If the level of disease is above the trigger level, action is taken • Well integrated and managed transition cow feeding program in place • Actions are taken to minimise the number calving assists • Strategies in place for minimising lameness • Vaccination and drenching protocols and farm biosecurity plans in place 					
<p>Y-R calving herds: Selecting a Voluntary Waiting Period</p>	<p>VWP: Between 30 and 60 days</p>		<ul style="list-style-type: none"> • Appropriate Voluntary Waiting Period selected for herd based on heat detection or conception rates, lactation persistence and other factors 					

Seasonal/split calving herds: Selecting mating start and stop dates (Calving pattern)	Not-in-calf rate based on length of mating period: If 6 weeks: 30% If 9 weeks: 20% If 12 weeks: 13% % cows calved by week 3:61% % cows calved by week 6:94% % cows calved by week 9: 100%		<ul style="list-style-type: none"> • Mating duration is no longer than 12 weeks • Only replacement heifers and older cows that conceive in the first 8–9 weeks of mating are retained • Percentage of the herd (cows and first calving heifers) calved in each calving period by weeks 3, 6 and 9 calculated and compared to targets • If calving patterns of herd or first calvers are too spread out, actions are taken to push more cows to the beginning of calving, and reduce the number of late-calving cows with support from an adviser 					
Pregnancy testing strategy	Manual (rectal) pregnancy testing of all cows by an experienced operator between 5 and 14 weeks pregnant		<ul style="list-style-type: none"> • Manual (rectal) pregnancy testing of all cows by an experienced operator between 5 and 14 weeks pregnant used to determine which cows are pregnant and when they conceived • Pregnancy testing is conducted with the mating history of each cow on hand so tester can identify the most likely service of conception 					
Culling strategy			<ul style="list-style-type: none"> • Culling decisions made take into account each cow's pregnancy status, milk production, age, cell count and any previous long interval between calvings 					

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