

MAIDEN HEIFERS

GOALS FOR MAIDEN HEIFERS

1

Calve all the maiden heifers in February 2021, this gives them the best opportunity to achieve 5.5 lactations.

2

Easy calving critical for future production. Inseminate with an easy calving sire of high reliability.

3

Maximize the number of replacements from the maiden heifers as they are the highest genetic merit animals and it will allow you to maximize the overall calf value of the herd by using beef sires on the mature cows.

PRE-BREEDING

1. Ideally have the maiden heifers at grass 3-4 weeks pre breeding. This will ensure that they are on a stable diet at breeding and are gaining weight. Heifers can gain 1Kg/day at grass.
2. At breeding heifers need to be at 60% of their mature body weight - 600 Kg cow mature weight heifers need to be 350 - 360 Kg without being fat. Heifers that are less than 320Kgs need supplementary feeding.
3. Ensure all vaccinations are received 3-4 weeks pre breeding.
4. In the last week pre breeding familiarize the heifers with the yard and crush by bringing them in daily and for encouragement feed them 1Kg per day of feed.
5. Watch the weather forecast for applying scratch cards as the heifers need to be bone dry.
6. Introduce the vasectomised bull to them and fit him with a chin ball, if he is a first season bull fit him with a chin ball without any paint in it for a week. It will be lighter on his head and he will be less likely to damage it.

BREEDING

1. Ensure heifers are on a rising plane of nutrition and are gaining weight. Avoid any reduction in intakes at this time, avoid keeping them in a bare paddock as it is near the crush or housing them on silage. This will reduce heat activity and conception rates.
2. HEIFERS 50KG OR LESS UNDER TARGET WEIGHT:
Breed these heifers in the 1st 3 weeks of the breeding season avoid delaying them by 3 weeks, as delaying by 3 weeks will result in March & April calvers and an early exit from the herd.
When grass quality begins to decrease in July start feeding these heifers to ensure that at housing, they are at target weight. Avoid delaying the supplementation of these heifers until November.

HEAT DETECTION

Decide which method or combination of heat detection you are going to use. Ideally for heifers use two methods as they can be difficult to detect accurately. Vasectomised bulls, scratch cards or paint sticks are superior to tail paint with heifers, as heifers are not heavy enough to rub off the paint unlike cows.

- ✓ Vasectomised Bull & Scratch Cards or Paint Sticks
- ✓ Scratch Cards & Paint Sticks



FAMILIARIZE THE HEIFERS WITH THE CRUSH AND YARD

Familiarize the heifers with the yard and crush by bringing them in daily and for encouragement feed them 1Kg per day of feed. This will ensure when you need to bring them in it will be easy and without delays.

In option 1 on synchronisation the heifers will be in the yard daily for 12 days.

In option 2 or 3 they will be in the yard for 3 or 4 days.

SCANNING

This is an extremely worthwhile exercise in heifers. Scan the heifers 30 days after the majority have been served and place scratch cards on the empty heifers and watch them carefully for repeats.

MONITOR STOCK BULL WHEN RELEASED

In maiden heifers it is crucial to monitor the stock bull throughout the season either with a chinball or scratch cards on the heifers. Repeats are not as evident in maidens; they are usually checked mid-day and activity is greatest early in the morning after daybreak or very late in the evening. Following synchronisation, the stock bull can be left in the following day. Remove the stock bull for the 2-4 days the repeats are due and apply the heat detection aids. However, AI'ing the repeats ensures that the bulls are not overworked, fertility is maximised, and it avoids bulls getting injured ensuring we will have them when we need them. AI each day when more than 1 repeat is presented to a young bull or 2 to a mature bull. Periods of low conception rate can occur when an increased number of repeats are presented to the bull.

SYNCHRONISATION FOR MAIDEN HEIFERS

Select the most appropriate synchronisation option based on time available for heat detection, location of heifers and ability to accurately detect heats in heifers.

OPTION 1 COST EFFECTIVE REGIME. MAIDEN HEIFERS - AI AT OBSERVED HEAT. 12 DAY HEAT DETECTION		
Monday 27 th April	Day 0 - Day 6	AI on observed heat - should have 1/3 detected at end of week.
Mon 4 th or Tues 5 th or Wed 6 th or Thur 7 th May	Day 6 or Day 7 or Day 8 or Day 9	PG to heifers not detected in heat. Only inject if 1/3 bred-otherwise investigate
Wed 6 th to Mon 11 th May	Day 7 - Day 12	AI on detected heat. Majority on 48-72 hours post PG injection

This is a cost-effective synchronization regime and achieves high conception rates. There is a requirement for 12 days heat detection to get all the heifers bred once.

Heat detect and AI for the 1st week, should have 1/3 bred. At the end of the week if close to a 1/3 of the heifers are not detected and served in the 1st week avoid injecting with PG and investigate what is the issue. The heifers may not be observed cycling because they are: under target weight (340kg), intakes have reduced (change in diet), they are pregnant or there may be an issue with heat detection.

Following PG injection ensure you are available for heat detection and drafting for AI 48-72 hours after PG injection. You can decide to inject on day 6, 7, 8 or 9 depending on your availability 48-72 hours later. Depending on the size of the group if more than 3 heifers are expected to be in heat each day, remove the vasectomised bull for this period (2-4 days) to avoid injury to the vasectomised bull. Scratch cards or paint sticks are a useful alternative for this period.

Any heifer not detected in heat may be reinjected 11 days after the 1st PG injection- 1st injection on Monday 4th May give the second injection on Fri 15th May.

If releasing a bull after one round of AI, watch carefully for repeats to ensure he is not overworked in those 2-4 days, if more than 2 repeats per day are expected use AI. An overworked bull will result in reduced fertility and an injured bull.

Estimated cost is €3-4 per heifer (€5 -7 per heifer treated)

OPTION 2 COST EFFECTIVE REGIME. MAIDEN HEIFERS - FIXED TIMED AI AT A PREDETERMINED TIME. NO HEAT DETECTION. 3 HANDLINGS IN THE CRUSH			
Monday 27 th April	2-3 PM	Day 0	Insert PRID or CIDR
Saturday 2 nd May	2-3 PM	Day 5	Inject PG and remove PRID or CIDR
Tuesday 5 th May	2-3 PM	Day 8	Inject GnRH and fixed timed AI (72 hours after PG injection)

Extremely useful options for herdowners with limited time for heat detection or where heifers are in an outside

place. Talk to your AI technician before commencing this programme to guarantee their availability on the required day. All heifers bred once with no heat detection required. However a number of heifers may show early heats on Monday 4th May. There may be benefit in inseminating them then.

If you wish you can let bulls run with them for 17 days (Wed 6th to Fri 22nd May). Remove the bulls and apply heat detection aids on day 17 Wed 29th April. Most repeats occur over 4 days. This allows you to achieve two services per heifer if required with 4 days heat detection and should result in 90-95% of the heifers incalf.

AI repeats day 18 to 24 (Sat 23rd to Fri 29th May). A l'ing the repeats ensures that the bulls are not overworked, fertility is maximised, and it avoids bulls getting injured ensuring we will have them when we need them.

Or apply heat detection aids let the bulls with them and watch for repeats and if there are more than 2 repeats per bull per day use insemination for 2-4 days.

Estimated cost is €20-24 per heifer.

OPTION 3 MAIDEN HEIFERS - MAXIMISE PREGNANCY RATES FIXED TIMED AI AT A PREDETERMINED TIME. NO HEAT DETECTION. 4 HANDLINGS IN THE CRUSH			
Monday 27 th April	2-3 PM	Day 0	Insert PRID or CIDR & Inject GnRH
Saturday 2 nd May	2-3 PM	Day 5	Inject PG
Sunday 3 rd May	2-3 PM	Day 6	Inject PG and remove PRID or CIDR
Tuesday 5 th May	2-3 PM	Day 8	Inject GnRH and fixed timed AI (72 hours after 1st PG injection)

Extremely useful options for herdowners with limited time for heat detection. Talk to your AI technician before commencing this programme to guarantee their availability on the required day. The advantage of this programme over option 2 is that early heats are eliminated on 4th May and you may achieve an increased conception rate.

This option is suitable for use with sexed semen as it overcomes any issue with timing of AI, early heats are practically eliminated and it ensures synchrony of heifers regardless of their stage of cycle.

Estimated cost €30-€32 per heifer.

SYNCHRONIZATION DRUGS		
PG	GnRH	P4 device
Estrumate	Receptal	CIDR
Lutalyse	Ovarelin	PRID
Enzaprost	Acegon	
Alfaglandin	Busol	

All the drugs are POM and are available from your veterinary practitioner. Zero milk withdrawal on all these products.

SYNCHRONISATION FOR DAIRY COWS

SYNCHRONISATION FOR DAIRY COWS FIXED TIMED AI AT A PREDETERMINED TIME. NO HEAT DETECTION

Monday 27 th April	AM	Day 0	Insert PRID or CIDR and inject GnRH
Monday 4 th May	AM	Day 7	Inject PG & Remove PRID/CIDR
Wed 6 th May	PM	Day 9	Inject GnRH (56 hours post PG)
Thur 7 th May	AM to noon	Day 10	AI all cows (16 - 20 hours post GnRH)

- Ideal for herds that wish to tighten and advance the mean calving date & maximises pregnancy rates as 100% submission is achieved.
- Superb for late calvers ensure cows calved 35 days, BCS of 2.75+ and Intakes are maximised.
- Suitable for sexed semen - overcomes issue of timing of AI and maximizes conception rates.

SYNCHRONISATION FOR MAIDEN HEIFERS

OPTION 1

COST EFFECTIVE REGIME. MAIDEN HEIFERS - AI AT OBSERVED HEAT. 12 DAY HEAT DETECTION

Monday 27 th April	Day 0 - Day 6	AI on observed heat - should have 1/3 detected at end of week.
Mon 4 th or Tues 5 th or Wed 6 th or Thur 7 th May	Day 6 or Day 7 or Day 8 or Day 9	PG to heifers not detected in heat. Only inject if 1/3 bred - otherwise investigate
Wed 6 th to Mon 11 th May	Day 7 - Day 12	AI on detected heat. Majority on 48-72 hours post PG injection

- If 1/3 of the heifers are not bred in the 1st week avoid injecting with PG as the heifers are not cycling- due to their weight, plane of nutrition, pregnancy or heat detection.
- For those that are not observed- reinject PG 11 days after the 1st injection. (1st injection Mon 4th May then 2nd Injection Fri 15th May).
- If releasing a bull after AI, watch carefully for the repeats to ensure he is not overworked. Prudent to use AI for those 2-4 days.

OPTION 2

COST EFFECTIVE REGIME. MAIDEN HEIFERS - FIXED TIMED AI AT A PREDETERMINED TIME. NO HEAT DETECTION. 3 HANDLINGS IN THE CRUSH

Monday 27 th April	2-3 PM	Day 0	Insert PRID or CIDR
Saturday 2 nd May	2-3 PM	Day 5	Inject PG and remove PRID or CIDR
Tuesday 5 th May	2-3 PM	Day 8	Inject GnRH and fixed timed AI (72 hours after PG injection)

- May get 10-15% early heats on Monday that can be inseminated.
- This regime allows you to inseminate all heifers with 3 handlings.
- Then you can let bulls run with them for 17 days (Wed 6th to Fri 22nd May) - remove the bulls and AI repeats day 18 to 24 (Sat 23rd to Fri 29th May).
- AI'ing the repeats ensures that the bulls are not overworked, avoids bulls getting injured ensuring we will have them when we need them.

OPTION 3

MAIDEN HEIFERS - MAXIMISE PREGNANCY RATES FIXED TIMED AI AT A PREDETERMINED TIME. NO HEAT DETECTION. 4 HANDLINGS IN THE CRUSH

Monday 27 th April	2-3 PM	Day 0	Insert PRID or CIDR & Inject GnRH
Saturday 2 nd May	2-3 PM	Day 5	Inject PG
Sunday 3 rd May	2-3 PM	Day 6	Inject PG and remove PRID or CIDR
Tuesday 5 th May	2-3 PM	Day 8	Inject GnRH and fixed timed AI (72 hours after 1st PG injection)

- This regime allows you to inseminate all heifers with 4 handlings and all are AI'd at a fixed time - No heat detection until the repeats.
- Then you can let bulls run with them for 17 days (Wed 6th to Fri 22nd May) - remove the bulls and AI repeats day 18 to 24 (Sat 23rd to Fri 29th May).
- AI'ing the repeats ensures that the bulls are not overworked, avoids bulls getting injured ensuring we will have them when we need them.
- Suitable for sexed semen - overcomes issue of timing of AI and maximizes conception rates.

Consult with your Vet to ensure you are on the most appropriate programme and with your AI technician to ensure his availability before commencing any synchronisation programme