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NEWSLETTER

December 2021 / January 2022

In this newsletter we will be covering the following topics:

MANAGING MASTITIS IN IN-CALF HEIFERS

Compiled by Martin Kavanagh, MVB Cert DHH

Some herds have a recurring problem where heifers calving have clinical mastitis, high cell count, or blind quarters. In order for mastitis to develop, bacteria must gain entry to the teat canal via the teat orifice to establish infection and provoke an inflammatory response that results in either clinical or subclinical mastitis. The majority of heifer mastitis problems result from infections in the last months before calving and at the time of calving.

There is also the possibility of heifer calves and maiden heifers at grass being exposed to bacterial challenge from flies and cross-sucking. Papilloma virus spread by flies and contact, causes warts which are a further risk for mastitis.

The majority of cases are sub-clinical, i.e. there is no evidence of dirty milk, clots or swellings. High SCC is picked up on the first recording. If the recording is done early in the lactation e.g. mid-March to early April, a judgement can be made on the extent of the heifer mastitis problem by looking at the new infection rate for heifers on the Cell Check report. When the number of heifers with cell count above 200 on the first recording exceeds 15% of the total heifers calved, then there is reason to pursue policies to reduce the heifers' exposure to bacteria. If there are more than 4% cases per month of clinical mastitis in heifers in February/March/April then the hygiene control in the calving areas also needs a review.

So, everything that is done to reduce the bacteria in the environment and on the teat skin and making sure the heifers' immunity to infection is at its best, will help reduce the incidence of heifer mastitis.

Charlie McConalogue, Minister for Agriculture, Food & the Marine unveiling the plaque to officially open the new dryer at Tipperary Co-Op, on 22nd October 2021 with William Ryan, Chairman.

Board of Directors pictured at the official opening of the new dryer in Tipperary Co-Op with Charlie McConalogue, Minister for Agriculture, Food & the Marine with John Daly, CEO Tipperary Co-Op; William Meagher, Vice Chairman and William Ryan, Chairman.

THE BOARD OF DIRECTORS AND STAFF OF TIPPERARY CO-OP WISH ALL SUPPLIERS, CUSTOMERS AND THEIR FAMILIES A SAFE CHRISTMAS AND A PROSPEROUS NEW YEAR

Some general measures:

- Prevent cross-sucking in calves by proper nutrition and management.
- Prevent flies in the summer for calves and maidens to reduce the risk of warts and summer mastitis.
- Adequate minerals and vitamins to pre-calving heifers, particularly Vit E and Selenium to promote immunity.
- Watch out that heifers don't get too fat and go through rough calvings as a result of poor bull choice.
- Watch out for udder oedema (excess springing) – control feeding of salt, too much protein and starch precalving.
- Critical to have enough space for heifers, cubicles, not slats. Overstocking will aggravate the problem, causing stress and bullying and competition for feed and beds.
- Clip the tails.
- Clean the beds and lime twice a day using a Cubicle lime with 20-30% hydrated lime added.
- Keep the calving areas as clean and dry as possible!

Reduce the overall prevalence of mastitis in the cow herd to reduce the risk of contaminating the heifers during first lactation.

Farm specific measures when rates of heifer mastitis are exceeding 30%

- Teat spraying three times per week with an iodine-based teat spray during the last weeks before calving has been shown to reduce the number of certain bacteria at the teat ends of heifers. Iodine spray has an added advantage of providing extra Iodine supplement to pre-calving heifers. While the research has been carried out using iodine-based sprays, there is no reason high concentration Chlorhexidine sprays (0.5% Conc) would not have a similar effect. Spraying can be done daily in heifers being trained to the parlour in the weeks pre-calving.

- Teat sealing heifers pre-calving is now much more accepted, and is used throughout the country even though this product is not actually licensed for use in heifers in Ireland. Teat sealant administered six weeks pre-calving in herds with heifer mastitis issues, when administered correctly and hygienically, was shown to effectively reduce heifer mastitis. Teat sealing heifers is not without risk, for human safety as well as for the heifer, as any dirt introduced at the time of application may prove disastrous, hence hygiene cannot be overstressed. The use of turnover crates with experienced operators has taken much of the risk out of this process. In my experience, high SCC and clinical mastitis has been dramatically reduced in problem herds by teat sealing. Also, if the teats are not patent, don't force in sealer. Some heifer teats will only accept a half or quarter tube. On no account use the remainder in another teat.
- Currently no external teat sealant/barrier products have been proven to be very successful in reducing heifer mastitis although research continues.

If the incidence of heifer mastitis is high on your farm, seek specific advice for your situation. Make sure you are milk recording early enough, identify the problem and also track if the changes you make are successful.

A GRAZING YEAR OF VARIATION WITH A GOOD END!

Compiled by John Maher, Teagasc, Moorepark

The year of 2021 was a bit of a roller coaster in terms of weather pattern and grass production. Broadly, it was a good year for those who farm on heavy land as the grazing conditions were much more favourable across most of the year. The grass production figures in Table 1 confirm that. The grass production figures show that the farms in the heavy soils programme produced similar levels of grass as those on PastureBase Ireland www.pbi.ie (countrywide figures). The average level of grass production on PastureBase Ireland dairy farms will be about 13 tons DM/ha, achieved with about 7 grazings /paddock for the year. These figures are similar to the average of the heavy soils programme farms outlined in Table 1.

Table 1. Grass production for Heavy Soils Programme farms in Munster from Pasturbase Ireland 2020 up to Nov 15th.

Farm	No. Of Grazings	No. Of Silage Cuts	Pre-Grazing Covers (Kg Dm/Ha)	Grazing (Kg Dm/Ha)	Silage (Kg Dm/Ha)	Total (Kg Dm/Ha)
Athea	7.3	0.7	1480	10845	1613	12458
Macroom	7.25	0.5	1424	10321	1084	11405
Doonbeg	6.9	1.1	1405	9747	2404	12151
Rossmore	7.8	0.7	1572	12258	1276	13534
Castleisland	9.1	0.2	1592	14566	415	14982
Kiskeam	7.6	0.5	1348	10243	1475	11718
Average	**7.7**	**0.6**	**1470**	**11330**	**1378**	**12708**

The level of Nitrogen fertiliser and Nitrogen from slurry spread to achieve this level of grass was 250 kg N/ha (about 200 units N/acre) in total.

TJ Ryan from Rossmore is the Heavy Soils farm in the table above and is also a monitor farm in the Teagasc/Tipperary joint programme. This farm has a mainly clay soil type with a water table that comes close to the surface. This proves challenging for grazing at the start and end of the year and when rainfall levels are high. However, this farm consistently performs well in terms of grass and milk production. Outlined in Table 2 is how the farm has progressed over the last 6 years.

Year	2016	2017	2018	2019	2020	2021
Cow No.	99	105	111	123	129	139
EBI (€)	80	108	125	136	146	158
6 Wk Calving Rate (%)	64	86	88	81	80	77
MS/Cow (kg) Delivered	424	442	497	516	533	540(est)

It is obvious from the table that all the major production figures have moved in the right direction. However, TJ has put a lot of investment into the farm and farmyard. Drainage, improving soil fertility and reseeding are the main farm investments while new cow accommodation, slurry storage, calf rearing facilities and a milking parlour are the key investments in the farmyard. It should also be stated that TJ puts a lot of time and effort into grazing management.

What's coming down the line?

Signals from the EU, Government and the Department of Agriculture, Food and the Marine indicate a reduction in fertiliser input (particularly Nitrogen) on dairy farms over the next few years. Signals from the marketplace suggest fertiliser N will be more expensive next year. Next spring will pose a particular challenge. Fundamentally, farmers will have to make use of their slurry to keep the cost of fertiliser under control.

For the record, it takes about 250 kg N/ha (200 units of N/acre) from a combination of fertiliser and slurry sources to grow 14 tons of grass DM/ha/year. The PastureBase Ireland average in grass production is 13 tons DM/ha/year and with a lot more N fertiliser input. There are some farms who can grow 14 tons of grass DM/ha with lower fertiliser N input than outlined above because the soil fertility on the farm is good and their grazing management is excellent.

However N fertiliser input can be reduced if:

1. Lime Application is increased (we are only applying 50% of what is required). About 20-25% of Fertiliser N is lost to the atmosphere if the soil pH is too low.

2. Soil P and K status improves. (P and K status automatically improves on most farms if the lime status is good)

3. Better use of slurry and soiled water is made. Slurry & soil water are a source of N and this should be counted and utilised. LESS technology (Trailing Shoe/Dribble Bar) is part of that solution.

4. More grass measurement takes place

5. Using GPS to spread fertiliser. The tractor version costs about €1,300 - €1,500 but Christmas is coming!

6. Having the fertiliser spreader set at the right height above the ground (75cm above ground level to the base of the plate/spout for most models). Replacing worn veins/spouts on the fertiliser spreader.

7. Substituting clover for chemical fertiliser. This has enormous potential during the 2nd half of the grazing season if adequate levels of clover are present in the sward.

A reduction in Nitrogen fertiliser input is possible on most farms.

Finally, I would like to wish all the readers a Happy Christmas and a good year for farming in 2022.

FARM DEVELOPMENT PROGRAMME

Please see the current data on the focus farms in the Tipperary Co-op/Teagasc Farm Development programme.

Week Ending 27th November 2020	John, Charlotte and John G Crowe	Peter Hughes and Paul Maguire	Glen Tour Farms	Seamus, James and Janice Farrell	T.J. Ryan	Solohead Research Farm
Milk Yield (Litres)	11	15	14	15.5	14.5	11
Butterfat %	5.58	5.39	5.17	5.23	5.14	5.36
Protein %	4.13	3.97	4.13	4.02	4.06	4.23
SCC ('000)	81	85	70	176	144	238
Concentrate Fed (kgs/Days)	4	4	5	4.5	4	2
Planned Date to be Fully Dry	80% Dry By Christmas	70% Dry By Christmas	22nd December	70% Dry By Christmas	80% Dry By Christmas	20th December
Closing Farm Cover (Kgs DM/HA)	870	700	497	575	663	680
Practise Selective Dry Cow Therapy (Yes/No)	YES	YES	YES	YES	YES	NO

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ANIMAL HEALTH CERTIFICATES FOR MILK YIELDING COWS

The Department of Agriculture Fisheries and Food require that Animal Health Certificates are returned to the Co-op on or before **31st December 2021**.

It is very important that all outstanding Animal Health Certificates are returned as a matter of urgency, as milk Purchasers will not be allowed collect milk from non-certified herds as and **from 1st January 2022**.

If you have returned your Health Certificate, thank you for your co-operation and kindly disregard this reminder.

ANTIBIOTICS/INHIBITORS/ PESTICIDES ANTHELMINTIC

Milk containing antibiotics cannot enter the food chain. It is prohibited for a milk supplier to supply such milk. All tanker loads of milk are tested for the presence of antibiotics/inhibitors prior to the milk being off-loaded. If the milk is found to contain such substances the contaminated tanker or part tanker is disposed of in accordance with the relevant legislation with a cost to the milk supplier. Please ensure you have the appropriate legal Liability Insurance protections in place to protect yourself for injury to others or damage to other property arising out of your business including the supply of product.

Tipperary Co-op provides a service in the laboratory to verify if milk is contaminated with Antibiotics / Inhibitors. Milk Suppliers should notify the Milk Collection Department at 087 2934107 and arrange for your milk sample to be brought into the laboratory for testing. **If you require any further information please contact: 087 2934107.**

OFFICIAL LAUNCH OF NEW INGREDIENTS DRYER

Pictures from the official opening of the new dryer on 22nd of October, 2021 with Charlie McConalogue, Minister for Agriculture, Food & the Marine

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OPEN DAYS IN OCTOBER FOR LAUNCH OF NEW INGREDIENTS DRYER

REASONS FOR A HIGH BACTERIA COUNT

When returning to milk production in Spring 2022 it is important to remember these points highlighted below to help ensure a low TBC :

- **Insufficient amounts of detergent being used** - Suppliers may be using the wrong inclusion rates for detergents or using for too many washes. Also hot water should not be recycled and it is in some cases.
- **Outlet of the tank is dirty** - Although the tank could be spotless inside the outlet never gets washed and this can lead to a build up of bacteria over the winter months. This is a very common problem.
- **Detergent has passed its use by date** - In some cases detergents are being used for too long and the detergent has deteriorated, hence the same washing capabilities are lessened. This type of problem generally is seen if TBC's are rising gradually and excess washing is not lowering the plate count. General rule of thumb is to use detergent within 8-9 months of buying or before the use by date.
- **Bulk Tank not cooling below 4 degrees** - Cooling temperature is very important. If the tank is slow in cooling it can be something simple like the compressors are low in gas, but some of the older tanks are unable to cool as efficiently as the newer tanks.
- **Milk Machine not serviced** - If rubber ware is worn it can harbor bacteria over the Winter period and milk stone will sit in cracked liners and rubber ware. The machine being serviced and rubber ware replaced is very important to ensure efficient cleaning.
- **Detergent not being properly dispensed in bulk tank wash cycle** - In the more modern bulk tanks, detergent is automatically sucked from the drums. The piping that sucks the detergent can become worn over time and this can lead to little or no detergent entering the wash cycles. It is best to check with a measured volume of detergent when the tank is washing to ensure the correct amount is taken in.

WATER QUALITY

Reducing Nitrogen losses at farm level

Understanding how nitrogen (N) losses occur from the farm is critical to mitigating against this pressure. Losses occur where excess N fertiliser is applied above the crop requirement, especially when crop growth conditions are poor. Excess N in the form of nitrate in the soil not utilised by the grass or crop may be lost or leached to groundwater during heavy rainfall. Nitrogen does not bind tightly to soil and as a result is prone to leaching in free draining soils.

Early and late nitrogen applications at farm level are the highest risk to water quality. Grass growth in the early months of the year can vary. The response to N is low at this time which can result in poor recovery by the crop and increased risk of loss to water. Soil and weather conditions need to be monitored prior to applying N early in the early growing season.

N losses are minimal during the growing season due to reduced rainfall and a higher requirement by the crop. Care needs to be taken when spreading N in autumn time, as it is a period of increased rainfall and decreasing crop growth. The closed spreading season is the period of the year with greatest risk of N loss to surface and groundwater, with up to 45% of the year's N lost during this period.

Ways to minimise nutrient losses from your farm:

- When spreading fertiliser or slurry, follow the three R's.
  - Right Place (i.e. spread on fields recently cut or grazed, spread P's on low index fields)
  - Right Time (i.e. avoid spreading when rain is forecast, ensure soil temperatures are up >5.5 degrees and grass growths should be climbing. Ensure ground is trafficable)
  - Right Rate (i.e. avoid over supplying plants with nutrients as they will just leach)
- Use low emission equipment (LESS) when spreading slurry. This will allow for a reduction in the amount of chemical N required and it will reduce ammonia losses to air.
- Ensure soil fertility is optimum for lime, P and K. Follow your Nutrient Management Plan (NMP). On moderate to highly stocked farms, aim for P and K index 3.
- Maintain buffers near water courses when spreading slurry in line with regulation (at least 5-10m).
- Soil sample regularly and update your NMP.
- Ensure soil is not compacted, this will allow the root system of plants to access and absorb available nutrients readily.
- Maximise the use of slurry and switch to using protected urea to reduce emissions and save costs as more nitrogen will be available to the plant.

Nitrogen Use Efficiency (NUE)

Nitrogen Use Efficiency is a relatively new term. Farm gate NUE is the efficiency with which the N entering the farm (feed, fertiliser and replacement livestock) is utilised on the farm and converted into product sold from the farm (milk, meat). National Farm Survey data shows that farm gate NUE is approximately 24% in Ireland. Improving this figure will reduce losses to water. The target is to increase NUE to 35% on grassland farms.

What can farmers do to improve NUE?

- Implementing the above measures.
- Reduce use of chemical N through better use of slurry & use of clover.
- Improving grass growth and utilisation.
- Reducing the concentrate crude protein content, particularly during the grazing season.

Improving NUE has many opportunities not only to improve water quality by reducing nitrogen losses through leaching, but also by reducing costs and increasing profitability at farm level.

Enhancing biodiversity for water quality:

Biodiversity has a key role in improving water quality. Hedgerows near streams and drains can act as a great buffer, trapping nutrients before they have a chance to reach water courses. Some actions farmers can take to enhance biodiversity are:

- Plant native trees and hedgerow species and fence newly planted areas to allow them to grow without being disturbed by grazing animals.
- Allow areas to grow wild, particularly in the summer months from May onwards. This provides natural vegetation for small mammals, bees and insects. A simple way of doing this is to allow grass in headlands and wildlife corridors to grow to seed.
- Avoid spraying under wires – the old tradition of keeping your farm neat and tidy and free of weeds is no more. Avoid spraying weeds, nettles etc. under wires and allow them to grow. If they interfere with fencing, strimming them is much better for the environment than spraying.
- Where you have open areas near water courses, consider planting native species. This will help biodiversity but will also help water quality and stabilise river banks.

Philip Murphy Agricultural Scientist LAWPRO, speaking at a recent farmer meeting on Water Quality in the Aherlow PAA at Cappauniac, Bansha.

AHI CELLCHECK TIP OF THE MONTH

Don't forget about your winter housing when trying to prevent mastitis

With changes in the weather farmers are now planning for housing. When it comes to mastitis control It is really important to maintain a clean, dry, comfortable environment for cows during the entire dry period no matter what type of housing you have. Poor cow cleanliness, has been shown to significantly increase the risk of new clinical mastitis infection, particularly due to E. coli. Below are some changes that can be easily made for this winter period.

- The use of a cow mat greatly improves the cow comfort and the length of time they will lie in the cubicle. The mat condition should be checked to ensure that the surface is not breaking down which can make the cubicle difficult to clean and leads to a build-up of dirt and bacteria. Lime should be used twice daily to improve dryness.
- Ensure proper cubicle usage with good cubicle design. Observe the cow's behaviour; how many cows are standing in the cubicles completely or half-on half-off? The latter may indicate that the cows find it difficult to lie down or get up due to poor cubicle design or inadequate space in front of their heads, which is needed to allow them lunge forward when getting up.
- The distance from brisket board to kerb and the height and location of the neck rail are extremely important. These measurements vary depending on cow type so it is important to discuss in more detail with your advisor or veterinary practitioner as they can be easily adjusted.
- Adequate feeding space and easy access to clean water are essential to avoid competition between cows and build-up of dung in the passageways, as cows queue to feed or drink.
- Dry cow nutrition is an important element of mastitis control because it influences the cows' immune status, both during the dry period and in the subsequent lactation. Get correct advice on the dry cow diet to avoid any issues arising. For example, being over-thin or over-fat, and metabolic diseases all increase the risk of mastitis.
- Good ventilation and natural light in the dry cow house provides a dry atmosphere, reducing the chance of bacteria surviving and multiplying in the shed.
- Carrying out a kneel test in straw pens is a good way to determine if the bed is dry enough or not. If your knees are damp or wet after kneeling on the straw bed this means the bed is not dry enough and needs more bedding. Regular removal of dung is essential to avoid build-up of bacteria in the environment. Approximately 55kg of straw is needed per cow per week for adequate bedding. A standard round bale contains 150 kgs of straw approx.

Good management of the cow and their housing around this time is important to ensure healthy cows and to reduce the risk of mastitis in the upcoming lactation. AHI has produced a winter housing checklist to help you assess your own accommodation and facilities before housing animals for the winter period.

Examining housing and management practices




Q3	How often are cubicles cleaned and limed?	☐ Twice a day	☐ Once a day	☐ Less than once a day
Q4	What is the floor surface like?	☐ Non slippy (e.g. grooved)	☐	☐ Slippy (e.g. not grooved)
Q5	How often are main passageways cleaned?	☐ Six or more times a day	☐ Three times a day	☐ It is set to manual
Q6	How often are minor walkway areas cleaned?	☐ Twice a day	☐ Once a day	☐ Less than once a day
Q7	Is there adequate feeding space?	☐ 0.6m/cow Up to 8 cows/bay	☐ 0.4m to 0.6m/cow 9 - 12 cows/bay	☐ Less than 0.4m/cow (more than 13 cows/bay)
Q8	How many water sources are available in the housing area?	☐ 3 or more large troughs per 50 cows	☐ 2 large troughs per 50 cows	☐ Cows are queueing for water
Q9	How often are the water source(s) checked or cleaned out?	☐ Daily	☐ Weekly	☐ Less than once weekly
Q10	How many cubicles are available per cow?	☐ 1.1 cubicles per cow (i.e. for 100 cows need 110 cubicles)	☐ 0.8 - 1 cubicle per cow	☐ Less than 0.8 cubicles per cow
Q11a	In loose housing (close up pens) how much space is available per cow?	☐ More than 6.5m² of bedded area per cow	☐ 4.5 - 6.5m² of bedded area per cow	☐ Less than 4.5m² of bedded area per cow
Q11b	How many additional individual calving pens are available?	☐ 1 pen (16m²) per 25 cows	☐ 1 pen (16m²) per 25 - 35 cows	☐ 1 pen (16m²) per more than 35 cows
Q12	How often is the straw shed bedded?	☐ Twice a day	☐ Once daily	☐ Less than once daily
Q13	How many kgs of straw do you use per cow during the housing period?	☐ Over 55kgs per week per cow	☐ 35 - 55kgs per week per cow	☐ Less than 35kgs per week per cow
Q14	How often is the straw shed or calving pen cleaned out completely?	☐ Every second day or daily	☐ Weekly	☐ Less than weekly or at the end of the season

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AHI CELLCHECK AWARD WINNERS FOR 2021

Overall Winners: Gráinne Dwyer, AHI, Andrew O'Neill, Tipperary Co-Op and William Ryan, Chairman Tipperary Co-Op with farm partnership of Martin Ryan, Michael and Eamon Slattery, Glenough, Rossmore

Andrew O'Neill, Tipperary Co-Op, John and Shane Gleeson, Killoskehane, Borrisoleigh

John English, Ballygodoon, Tipperary and Andrew O'Neill, Tipperary Co-Op

Oliver Stapleton, Mantlehill, Golden and Andrew O'Neill, Tipperary Co-Op

John, Margaret and Denis O'Dwyer, Knockgorman, Donohill Denis pictured above

Paddy and Pádraig White, Bishopswood, Dundrum

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Christmas & New Year Opening Hours 2021

DECEMBER 2021	O'BRIEN ST	BORRISOLEIGH	GOOLDSCROSS
Thursday 23rd	OPEN 8.30-5.30PM	OPEN 9.00-5.30PM	OPEN 9.00-5.30PM
Friday 24th	OPEN 8.30-1.00PM	OPEN 9.00-1.00PM	OPEN 9.00-1.00PM
Saturday 25th	**CLOSED**	**CLOSED**	**CLOSED**
Monday 27th	**CLOSED**	**CLOSED**	**CLOSED**
Tuesday 28th	**CLOSED**	**CLOSED**	**CLOSED**
Wednesday 29th	OPEN 8.30-5.30PM	OPEN 9.00-5.30PM	OPEN 9.00-5.30PM
Thursday 30th	OPEN 8.30-2.30PM	OPEN 9.00-2.30PM	OPEN 9.00-2.30PM
Friday 31st	**CLOSED** [STOCKTAKING]	**CLOSED** [STOCKTAKING]	**CLOSED** [STOCKTAKING]
JANUARY 2022			
Saturday 1St	**CLOSED**	**CLOSED**	**CLOSED**
Monday 3Rd	OPEN 11.00AM	OPEN 11.00AM	OPEN 11.00AM
Tuesday 4Th	OPEN 8.30-5.30PM	OPEN 9.00-5.30PM	OPEN 9.00-5.30PM

Christmas 2021 Milk Collections Dates

Sunday 19/12/21 Open normal hours	Collection as normal
Monday 20/12/21 Open normal hours	Collection as normal
Tuesday 21/12/21 Open normal hours	Collection as normal
Wednsday 22/12/21 Open normal hours	Collection as normal
Thursday 23/12/21	Collection as normal
Friday 24/12/21	**CLOSED**
Saturday 25/12/21	**CLOSED**
Sunday 26/12/21	**CLOSED**
Monday 27/12/21 Open normal hours	Collection as normal
Tuesday 28/12/21 Open normal hours	Collection as normal
Wednsday 29/12/21 Open normal hours	Collection as normal
Thursday 30/12/21	**CLOSED**
Friday 31/12/2021	**CLOSED**
Saturday 01/01/2022	**CLOSED**
Sunday 02/01/2022 Open normal hours	Collection as normal

The Management and Staff of Tipperary Co-Op wish all our Customers and Families

a Safe and Peaceful Christmas and Prosperous New Year

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