**Dry cow, calving and colostrum management practices on Irish dairy farms and their association with herd size and herd expansion**

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**Supplementary Material**

*Cow management practices*

What is the average length of your cows' dry period?

• <4 weeks

• 4­8 weeks

• 8­12 weeks

• 12­16 weeks

• >16 weeks

What is your cows’ diet during their dry period? Please select all relevant options.

• grass silage only

• grass silage and concentrate

• maize silage and concentrate

• TMR (concentrate, grass silage, maize etc)

• other

If you feed pre­calving minerals, how long before calving are they fed?

• I do not feed pre­calving minerals

• 0­2 weeks pre­calving

• 3­5 weeks pre­calving

• 6­8 weeks pre­calving

• >8 weeks pre­calving

If you feed your cows pre­calving minerals what form do you use? Please select all relevant options.

• I do not feed pre­calving minerals

• powder (food supplement)

• lick (bucket/block)

• boluses (capsule dose)

• drench (liquid dose)

• injections

• through water

• pre­calver feed/nuts

On a five­point scale, what is your target body condition score (BCS) for your cows at calving?

• I do not BCS

• ≤2.5

• 2.5 ­ 2.75

• 2.75 ­ 3.0

• 3.0 ­ 3.25

• 3.25 ­ 3.5

• 3.5 ­ 3.75

• ≥3.75

*Calving management practices*

What is the average length of your calving season?

• <6 weeks

• 6 ­ 10 weeks

• 10 ­ 14 weeks

• 14 ­ 18 weeks

• 18 ­ 22 weeks

• >22 weeks

Do you use shared and/or individual pens for cows at calving? Please select all relevant options.

• shared

• individual

How long before calving do you move cows into calving pens?

• >2 days pre­calving

• 1­2 days pre­calving

• 24 hours pre­calving

• 0­12 hours pre­calving

• when calving

• when calved

• other

What type of bedding is used for cows at calving? Please select all relevant options.

• straw

• woodchips

• sawdust/shavings

• rubber mats

• other

How often are cows that are in calving pens checked? Please select all relevant options.

• check morning and evening

• check every 0­6 hours during the day

• check 0­6 hours during the day and late at night

• check every 0­6 hours day and night

• use a camera to assist 24 hour watch

• other

How long do you wait before handling/assisting a cow once you see she has started calving. Please select all relevant options.

• < 1 hour

• 1­2 hours

• 2­3 hours

• 3­4 hours

• 4­5 hours

• 5­6 hours

• >6 hours

When do you call a vet to a cow at calving?

How do you clean/wash/disinfect calving pens? Please select all relevant options.

• I do not clean calving pens

• clean out only

• clean out and wash

• clean out and disinfect

• clean out, wash and disinfect

• other

How often do you clean/wash/disinfect calving pens?

• I do not clean pens

• more than once weekly

• weekly

• fortnightly

• once monthly

• less than once monthly

• between seasons

*Colostrum management practices*

After you have seen that a cow has calved, how soon is colostrum (beestings) usually collected from the cow?

• I do not collect colostrum

• immediately

• within 2 hours

• within 5 hours

• within 9 hours

• > 9 hours

• at next milking

If you selected >9 hours please specify length of time.

If you store colostrum, how soon after collection do you usually store it?

• I do not store colostrum

• immediately

• within 2 hours

• within 5 hours

• within 9 hour

• 9 hours

If you selected >9 hours, please specify length of time.

If you store your cows' colostrum, how do you store it? Please select all relevant options.

• I do not store colostrum

• fridge

• freezer

• room temperature

If you store your cows' colostrum, for how long do you store it? Please specify all relevant options.

• I do not store colostrum

• fridge

• freezer

• room temperature

If you freeze colostrum, how do you usually defrost it? Please select all relevant options.

• I do not freeze colostrum

• rapidly in microwave (e.g. Full power)

• slowly in microwave (e.g. Defrost mode)

• immerse in boiling water

• immerse in warm water

• at room temperature

• other

Do you test the quality of your cows' colostrum

• yes

• no

If you test your cows' colostrum, how do you test it? Please select all relevant options.

 • I do not test colostrum

• colostrometer

• snap testing kit

• sent to laboratory

• other

Have you diagnosed Paratuberculosis (Johne’s disease) on your farm? Please select all relevant options.

• no ­ did not test

• no ­ results were negative

• yes ­ via dung sample

• yes ­ via milk sample

• yes ­ via blood sample

• currently testing

Where do you source your colostrum for your calves' first feed?

• calfs' own dam

• first milk colostrum from a single cow

• pooled colostrum

• colostrum replacer

• imported colostrum (e.g. From a neighbouring farm)

• other

In the case that you do not feed colostrum from the calfs' own dam, which of the following do you use? Please select all relevant options.

• any cow

• mature cows (higher lactation cows)

• healthy cows (e.g. Free from Paratuberculosis/mastitis problems)

• other (e.g. Heifers only)

If there is an insufficient supply of fresh colostrum, where do you source your 'backup' supply? Please select all relevant options.

• own frozen supply

• neighbours supply

• colostrum replacer

• transition milk (2nd ­ 4th milking post­calving)

• other

After birth, on average how soon do the calves receive their first feed of colostrum?

• within 1 hour

• within 3 hours

• within 6 hours

• within 9 hours

• within 12 hours

• >12 hours

If you selected >12 hours, can you please specify the time interval.

At the first feed of colostrum, what method is used to feed the calves? Please select all relevant options.

• leave with cow

• bottle and teat

• bucket and teat

• bucket (no teat)

• stomach tube

• other

At the first feed of colostrum, what volume is fed to the calves?

• I don't know (calf is left with cow)

• <2 litres

• 2 ­ 3 litres

• 3 ­ 4 litres

• >4 litres

How long is each calf fed colostrum/transition milk before moving to whole milk/milk replacer?

• 1 ­ 2 days

• 2 ­ 3 days

• 3 ­ 4 days

• 4 ­ 5 days

• >5 days

If you selected >5, please specify the number of days.