

Completing the level two physical questionnaire will enable the generation of a level two physical detail report which is a two page report.

Page One: Physical Detail A Report

Available by completing sections 9 - 19 of this questionnaire

These sections are compulsory to complete

Page Two: Physical Detail B Report

Available by completing sections 20 - 23 of this questionnaire

These sections are optional to complete (but sections 9 - 19 must still be completed)

Before level two physical information can be committed and a report generated a **level one questionnaire must also be completed** (sections 1 - 9). If you have not already completed this questionnaire or do not have a copy, contact the rural professional you are working with through DairyBase or download from www.dairybase.co.nz

Tips for completing this questionnaire:

1. Utilise information in light grey shaded areas for suggestion on where to source answers and further clarification on what the question is asking
2. If information is lacking to complete question use the default option (where available)
3. If you are having trouble or get stuck on a question, move on and come back to it
4. Utilise your DairyBase rural professional to assist or contact DairyBase on 0800 4 DairyNZ

Once this questionnaire is completed return to your rural professional, consulting officer or the DairyBase support centre (Cnr Ruakura & Morrinsville Roads, Newstead, Private Bag 3221, Hamilton 3240).

Farm Business Name:			
Client Name:			
Season: e.g. 2023 / 24		DairyBase Id Number:	

Section 9 – Farm description – Required information (sections 1 to 8 are covered in the Level 1 Questionnaire)

Farm Dairy	Shed type (please select)	Herd calving season (please select)	Dairy Size (number of sets of cups)	Number of staff milking (include person on herds)	Milking time (minutes)	Number of cows peak milked	Number of go-around twice cows (Rotary only)
Shed 1							
Shed 2							
Shed 3							

Rainfall for season (mm)		Enter if measured, otherwise district average will be used.
Pasture potential of the farm (t DM/ha)		To find out the pasture potential search "Pasture potential tool" on the DairyNZ website.

Section 10 – Physical Description – These values influence the maintenance requirements of the cow and are used in the energy calculations – Required information

Distance from farm dairy to furthest paddock (km)		Estimate from farm map if available
% of farm at a different height/altitude to farm dairy		Only needed if a significant portion of the farm is hilly or if the cows have a significant climb to/from the farm dairy
Average difference in height between farm dairy and hill paddocks (m)		

Section 11 – Stock Description – Values from this section appear in the report under ‘Physical Description’ and are used in energy calculations, as well as being a useful indicators in their own right –Required information

Cow LWT kg (Dec 1)		kg	Jersey	KiwiCross	Friesian
			375-425 kg	445-485 kg	500-550 kg
	Actual / Estimate	The ranges provided above are approximate weight ranges based on cow breed. Circle whether the figure you provided is actual (weighed) or estimate.			
Herd BW/Reliability	LIC / CRV	BW /			
Herd PW/Reliability	PW /	Date:			

Section 12 – Milk Production – This section captures all milk output from herd (except colostrum) whether saleable or not to gain greater accuracy to estimate the energy requirements. Per cow daily production at peak and at end of December are used to calculate monthly drop off from peak which can be an indicator of loss of pasture quality – Required information

Discarded milksolids (kg) (Number of cows x days withheld x average kg MS/cow/day)		Discarded milk solids e.g. from sick cows disposed of and NOT fed to calves plus any dumped milk (e.g. chiller faults or penicillin in milk). Refer to animal treatment records for number of cows treated and withholding period. Use average if different treatments have different withholding periods e.g. 150 cows x 6 days x 1.6 kgMS = 1440 kgMS
Litres of milk fed to calves (Number of calves x litres/calf/day x no. days)		Includes sick cow milk and saleable milk taken from vat and fed to both replacement & non-replacement calves (do not include colostrum milk). For a 25% replacement rate, for calves fed for 8 weeks, approximately 25% of their feed will come from colostrum so adjust number of days fed out of the vat

Complete calculation table below if total not known - include replacement & non-replacement calves reared; exclude colostrum milk fed to calves

	Number of calves reared	Estimated litres of milk/calf/day (sick cow milk and saleable milk only)	Number of days fed milk
Spring			
Autumn			

Section 12 – Milk Production – <u>SPRING HERD</u> This section captures all milk output from herd (except colostrum) whether saleable or not to gain greater accuracy to estimate the energy requirements. Per cow daily production at peak and at end of December are used to calculate monthly drop off from peak which can be an indicator of loss of pasture quality – Required information		
Average daily milk solids per cow for 10 days at peak (KgMS / cow / day 10 day average)		Peak period is when the highest daily per cow production is achieved. Take into consideration that not all cows may have calved and some milk may also be going to the calves. So the milk statement may not always reflect peak per cow production. Refer to milk company statements and daily records as a starting point
Last date of 10 day peak		If peak was on 10 Oct then the last day of 10 day peak would be 15 Oct ie 5 days after peak
Milksolids to 31 Dec sold to factory		Refer to December dairy company statement under “season to date production” or dairy company website “1 Jun to 31 Dec production”
Average daily milksolids per cow for last 10 days in December (KgMS / cow / day 10 day average)		Refer to December dairy company statement or website for daily production. Work out by dividing average daily milk solids for last 10 days in December by number of cows milking at 31 Dec
Number of in-milk carryover cows on 1 June (start of the season)		Number of cows that calved in spring of the previous season not-in-calf and still in-milk at the beginning of the current season (1 Jun) (Split calving herd-Dry these cows off, in the top section of the following table, at the same time as the autumn herd unless earlier culling/death details are available. Known culls/deaths to be entered as before PSC in calculator.
Number of in-milk carryover cows on 31 May (at the end of the season)		Number of cows that calved in spring of the current season not-in-calf and still in-milk at the end of the season (31st May) (Split calving herd-Dry these cows off on 1 June. DIM will be captured in the above section next year. (Number of cows required for physical report)).
Planned start of calving date		Planned start of spring calving for Mixed Age Cows. Can be found on your Fertility Focus Report
Date when 50% of cows calved		Information can be obtained from Minda Live Calving or yellow note book. If yellow note book is being used, count cows until you reach 50% of cows and use that date or mean calving date from calving report and subtract 5 days
Number of cows calving in Spring on 1 June		This should include all cows calving from 1 Jun to 31 Dec for spring calving. Information can be obtained for calving report
Number of cow deaths		Number of cows died throughout the season.
Number of cows culled		Number of cows culled throughout the season.
Days in milk per cow		Average days in milk for herd. If known enter in value cell, if not known complete Days in milk table (section 13a) on the following page. A separate table must be completed for Spring and Autumn

Section 13 – Days in Milk table – SPRING HERD

This asks for number of cows and date they were removed from milking herd either because of death, culling or drying off. Information can be obtained from animal removal report. Otherwise any animals sold or sent to works will be recorded in animal health declaration book and yellow note book

Spring Herd	Date (xx/xx/xxxx)	Died	Culled	Dried Off
Carryover cows – in-milk				
Cow sales & deaths before Planned Start of Calving				
Spring Calving Herd				

Section 12 – Milk Production – AUTUMN HERD This section captures all milk output from herd (except colostrum) whether sell-able or not to gain greater accuracy to estimate the energy requirements. Per cow daily production at peak and at end of August are used to calculate monthly drop off from peak which can be an indicator of loss of pasture quality – Required information (Top box not required for split calving herds with a peak milk value in spring).

Average daily milk solids per cow for 10 days at peak (KgMS / cow / day 10 day average)		Peak period is when the highest daily per cow production is achieved. Take into consideration that not all cows may have calved and some milk may also be going to the calves. So the milk statement may not always reflect peak per cow production. Refer to milk company statements and daily records as a starting point
Last date of 10 day peak		If peak was on 10 May then the last day of 10 day peak would be 15 May ie 5 days after peak
Milksolids to 31 Aug sold to factory		Refer to August dairy company statement under “season to date production” or dairy company website “1 February to 31 August production”
Total milksolids produced by Autumn herd (kg)		Total kg milksolids produced by the Autumn-calving herd during the season (From February of the year the season starts till the end of January of the following year).
Average daily milksolids per cow for last 10 days in August (KgMS / cow / day 10 day average)		Refer to August dairy company statement or website for daily production. Work out by dividing average daily milk solids for last 10 days in August by number of cows milking at 31 Aug
Planned start of Autumn Calving		Planned start of autumn calving for Mixed Age Cows. Note , enter the calving details for the calving period prior to the start of the season. For example, in the 2023/2024 season, enter the calving details from Autumn 2023.
Date when 50% of cows calved in Autumn		Information can be obtained from Minda Live Calving or yellow note book. If yellow note book is being used, count cows until you reach 50% of cows and use that date or mean calving date from calving report and subtract 5 days
Number of Autumn cows calving		This should include all cows calving from 1 Jan to 31 May for Autumn calving. Information can be obtained for calving report
Number of cow deaths		Number of cows died throughout the season.
Number of cows culled		Number of cows culled throughout the season.
Days in milk per Cow Autumn		Average days in milk for herd. If known enter in value cell, if not known complete Days in milk table (section 13a) on the following page. A separate table must be completed for Spring and Autumn

Section 13 – Days in Milk table – AUTUMN HERD

This asks for number of cows and date they were removed from milking herd either because of death, culling or drying off. Information can be obtained from animal removal report. Otherwise any animals sold or sent to works will be recorded in animal health declaration book and yellow note book

Autumn Herd	Date (xx/xx/xxxx)	Died	Culled	Dried Off
Cow sales & deaths prior to planned start of calving				

Section 13a – Days in Milk table – AUTUMN HERD contd

This asks for number of cows and date they were removed from milking herd either because of death, culling or drying off. Information can be obtained from animal removal report. Otherwise any animals sold or sent to works will be recorded in animal health declaration book and yellow note book

Autumn Herd	Date (xx/xx/xxxx)	Died	Culled	Dried Off

Section 13b – Additional Information for SPLIT CALVING HERDS

This is to help capture the Days in Milk of those empty carryover autumn calvers that join the spring herd to continue milking.

Autumn cows dried off (**TOTAL**):

Empty cows carried over and combined with spring herd:

Dry off date (if known):

or use spring herd dry off date:

Section 14 – Young stock grazed ON the effective (milking) area – Identifies the amount of feed eaten by young stock and is used to calculate Pasture Eaten on the effective area– Required information

	Number of animals	Age at start of grazing (months)	Age at end of grazing (months)	Stating the age animals started grazing indicates how much feed they will be consuming
Rising one-year olds				Animals from 3 months weaning to 10 months of age
Rising two-year olds				Animals from 11 months to 22 months of age

Section 14 – Young stock grazed OFF the effective (milking) area. If no young stock are grazed off the milking platform then leave as zero. Helps better estimate the demand of feed by the herd– OPTIONAL

	Number of animals	Age at start of grazing (months)	Age at end of grazing (months)	Stating the age animals started grazing indicates how much feed they will be consuming
Rising one-year olds				Animals from 3 months weaning to 10 months of age
				If young stock leave in groups enter number and age of each group in separate lines
Rising two-year olds				Animals from 11 months to 22 months of age
				If young stock leave in groups enter number and age of each group in separate lines

Section 15 – Grazing off dry cows – Identifies the amount of feed eaten by dry cows not grown on the effective area – Required information

	Mob 1	Mob 2	Mob 3	Mob 4				
Number of cows					Number of cows grazed off from 1 Jun, includes in-calf heifers			
Total days grazed away from milking area					If gradually sent or brought back between grazing and milking platform use average length of time for herd			
kgDM/cow/day offered					This is feed offered (grass & supplement). Knowing whether cows gain, lost or maintained weight will give some indication of intake			
						Friesian	Crossbred	Jersey
					Held condition	10	9	8
					Gained weight	13	12	11
Average MJME/kgDM	11MJME/kgDM or _____				Average of all feeds eaten at grazing including supplement. Use 11ME for pasture			
Utilisation %	85% or _____				Use 85% for pasture unless very wet. Relates to feed offered to arrive at actual feed eaten			

Section 16 – Crops grazed & feed harvested on effective area – Required information		
Area harvested for hay & silage (ha)		Includes grass and lucerne. If more than one cut taken from same area count each cut separate e.g. 10ha x 3 cuts = 30ha
Summer crop grazed by dairy cows (ha)		Summer crop to be grazed by the stock (herd and young stock on effective area) in the production season
Winter crop grazed by dairy cows (ha)		Only include winter crop area which is grazed in the production season you are collecting information for. Do not include paddocks which may be out for planting for the following season
Harvest crop (ha)		Includes cereal and maize. Must be <u>harvested</u> not grazed
Feed grown on the milking platform and still-on-hand at the end of the season (TDM)		Includes feed grown on the milking platform during the season and still on hand at the end
Feed grown on the milking platform and exported during the season (TDM)		Includes feed grown on the milking platform during the season and not fed out to milking cows; e.g. fed out on support block or sold off farm.

Section 17 - Supplements made on the milking platform in previous season and fed this season.
Identifies the amount of feed eaten by stock (the herd and young stock) while they are on the effective area that was not grown on the effective area this season. Reported under ' Feed Eaten' section of the report – Required information

Type of feed	Tonnes of wet matter (WM)	DM %	Tonnes of dry matter (DM)	Average MJME/kgDM	Utilisation
Maize Silage (made on farm in previous season) fed					
Pasture silage / baleage (made on farm in previous season) fed					
Hay (made on farm in previous season) fed					
Other supplements (made on farm in previous season) fed					

Supplements purchased, brought in from support block fed out during the season
Section 17 – Imported supplements fed out on effective area during season – Identifies the amount of feed eaten by stock (the herd and young stock) while they are on the effective area that was not grown on the effective area. Reported under ‘ Feed Eaten’ section of the report – Required information

- Includes any feed grown on owned or leased support block, brought home and fed on effective area, plus any purchased feed fed on the effective milking area during production season
- Imported feed may include feed on hand at the start of the season i.e. carried over from the previous season
- If any stock normally on effective area during the season graze off the effective area (e.g. neighboring paddock/support block) for short time period (e.g. 12 hours) then treat as imported feed and enter below by estimating the total tonnes of DM fed to the stock
- Refer to imported supplements table section 19 for DM%, MJME and utilisation of feeds.

Type of feed All expressed in Tonnes of Dry Matter (tDM)	From Feed Inventory (tDM)	Purchased (tDM)	From Support Block (tDM)	Average MJME/kgDM	Utilisation

Imported Supplements – Information on dry matter, energy and utilisation of feed

Maize silage	DM 30-38%, MJME 10.0 – 11.0, Utilisation : Bins 75-85%. Dry Paddock, 65-75%. Wet paddock, 50-60% (includes storage losses)	Proliq	DM 32-40%, MJME 9-11, Utilisation %: 95%
Baleage/Pit silage	Baleage DM 30-40%, MJME 8.0 – 12.0, Pit Silage DM 25-30%. Utilisation %: Dry paddock 70-80%. Wet paddock 60-70%.	Kiwifruit	Average DM 14% soft, 20% hard. MJME 9-11 soft, 12-12.5 hard.
Hay	DM 85%, MJME 6.0 – 9.0, Utilisation 60-85%	Maize grain/gluten	DM 87-89%. MJME 13.5, Utilisation %: Bins 80-90%, Shed 95%.
Concentrates	Most will be approx 90% DM, MJME 13.5, Utilisation 80-95% (includes storage losses)	Molasses	DM average 75%. MJME 11.5. Utilisation %: 95%
Lucerne silage & Hay	DM 85%. MJME 8.0 – 10.0. Utilisation %: Dry paddock 70-80%, Wet paddock 60-70%	Onions	DM average 10%, MJME 13.0.
Palm kernel	DM 90-95%. MJME 11.0, Utilisation %: Bins 80-90%, Shed 95%	Potato	DM average 20%, MJME 13.0.
Cereal silage	DM 30-40%. MJME 9.0 - 10.5. Utilisation %: see maize silage	Carrots	DM average 12-13%, MJME 13.0.
Barley/wheat grain	DM 86-89%, MJME 12-13, Utilisation %: Bins 80-90%, Shed 95%.	Soybean meal	DM 90%. , MJME 12.5. Utilisation %: Bins 80-90%, Shed 95%
Bread	DM average 63%	Sweet corn silage	DM average 20%, , MJME 9.5-10.5.
Brewers grain	DM 24%. MJME 10.5. Utilisation %: Bins 80-90%, Shed 95%	Broll	DM 85%, , MJME 9.5-11.0.
Cereal straw	Average DM 85-89%. , MJME 6.0 - 7.0.	Tapioca	DM 88%. , MJME 12.5. Utilisation %: Bins 80-90%, Shed 95%

Section 18 – Irrigation – These fields must be completed if farm uses irrigation (does not include effluent spread on pasture). If data not available for all irrigation used on milking platform, use data for predominate irrigation type - Required information if farm irrigated

Either complete A) irrigation system(s) or B) Total/Average Irrigation data for the farm

A) Irrigation Systems

Irrigation Type (Centre Pivot, K-line, etc)	Milking area irrigated (ha)	Days of season irrigated (refer to meter records)	Irrigation Interval (days) (time taken for irrigator to return to starting point)

OR B) Total/Average Irrigation

Milking area irrigated (ha)	Days of season irrigated	Irrigation interval (days)

Irrigation – Water Volume (Enter one from options below)

(1) Total metered water (m ³) - <i>preferred</i>		If the water supply is not metered and (1) cannot be entered, then water applied will be derived from (2) or (3). Only irrigation applied to milking area is of interest and reported so if total metered water includes irrigation for other areas then you may need to use flow rate instead
(2) <u>OR</u> Instantaneous flow rate (l/sec/ha)		
(3) <u>OR</u> Flow rate (bore /borderdyke) (l/sec)		

Shed Water Usage - Total litres of water used in the dairy shed during the season

Water used in the dairy shed (litres/year)		This information can be obtained from dairy shed water meter records (if available).
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Section 19 – General comments e.g. major flood, dried off early, first year conversion

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Section 20 – Fertilisers and soils – Soil test data for effective area only. If more than one soil test will need to calculate weighted average for farm – Optional information

	Minimum	Maximum
Soil test pH		
Olsen P (ave)		

Fertiliser application record - there are two ways to record this (complete only one):

Option one
 If fertiliser statement applies to fertiliser that is applied to the effective milking platform area only, use the below table to enter kilograms of the element applied to the dairy area

Option two
 If fertiliser statement includes fertiliser that is applied to more than the effective area (e.g. support block) use the table below making sure you remove any applications applied to areas other than the effective area. Enter the fertiliser type and total tonnes applied and the DairyBase calculator will work out the total Kgs of each element applied

Enter either as total kg or kg/ha	Total kg Or kg/ha		Fertiliser type e.g. Urea, Superphosphate, Lime	Tonnes applied to milking area only	ha applied to
	Total kg	kg/ha			
Nitrogen (N)					
Phosphorus (P)					
Potassium (K)					
Lime					
Lime is likely to be applied in tonnes/ha, check the correct units have been entered					

Section 20 – Environment – Optional Information

Environment

Riparian Planting area (ha)		Area of the farm used for riparian planting. This information may be found in Overseer or your Farm Environment Plan
% of herd able to be stood off for more than 24 hours		
Number of effluent storage days		

Soil Type and Drainage (Enter up to 4 soil orders and drainage classes)

Soil Drainage class can be found in your the farm Overseer Report, Nitrogen Scorecard or the Farm Environment Report.

	Soil Order (select one)	Percentage of farm effective area		Soil Drainage class (Select one)	Percentage of farm effective area
Soil order 1		%		Soil Drainage Class 1	%
Soil order 2		%		Soil Drainage Class 2	%
Soil order 3		%		Soil Drainage Class 3	%
Soil order 4		%		Soil Drainage Class 4	%

Environmental KPI's from Overseer Report (Whole Farm)

Overseer Version Number (number separated by dots e.g. 6.3.2)		Phosphorous loss (kg P/ha/year)	
Current area receiving liquid effluent (%)	%	Methane emissions (eCO2/kg/ha/year)	
Nitrogen surplus (kg N/ha/year)		Nitrous Oxide (N2O) emissions (eCO2/kg/ha/year)	
Nitrogen loss from root zone (leached) (kg N/ha/year)			

Section 21 – Calving and Mating – Values appear in Part B of the report and are compared to industry targets rather than benchmarks. The majority of the data is available from your Fertility Focus Report or calving/mating report provided records are up to date – Optional information

	Spring Herd	Autumn Herd	
Start of mating			Use date for mixed age cows only (not yearling matings). Available from mating report
Date AB finished			Available from mating report or from Fertility Focus Report page 2. If no AB used enter date bull withdrawn
Date bull withdrawn from herd			If bull left with herd for remainder of season enter date which matches culling criteria for calving date
If Short Gestation straws are used after the bull is withdrawn, add the the length of time SG is used onto the "Date AB Finished" (in box above) and update "Date bull withdrawn from herd" to final date of mating			
6-week in-calf rate	% Actual Estimate	% Actual Estimate	% from the Fertility Focus Report. This is the percentage of cows pregnant in the first 6 weeks of mating. Circle whether actual or estimate
3-week submission rate	%	%	% from the Fertility Focus Report. Number of cows mated at least once in 21 days from PSM.
Not-in-calf rate	%	%	% from the Fertility Focus Report. Percentage of cows that failed to become pregnant during both the AB and bull mating periods.
Percentage of cows calved by 3 weeks from PSC	%	%	% from the Fertility Focus Report.
Percentage of cows calved by 6 weeks from PSC	%	%	% from the Fertility Focus Report.
Percentage of cows calved by 9 weeks from PSC	%	%	% from the Fertility Focus Report.
Non-cycling cows treated for anoestrus (also known as CIDR cows)	%	%	% from the Fertility Focus Report. Total percentage of non-cycling cows treated for anoestrus (also known as CIDR cows)

Section 22 – Mastitis and Lameness – Values appear in Part B of the report and are compared to industry targets rather than benchmarks – Optional information

Number of antibiotic treatments for lameness		Number of recorded antibiotic treatments for lameness for the season. Refer to treatment register in Dairy Diary or Minda Live Health Treatments.
Number of antibiotic treatments for mastitis		Number of recorded antibiotic treatments for mastitis for the season. Refer to treatment register in Dairy Diary or Minda Live Health Treatments.
Average bulk milk somatic cell count (for season)		Refer to dairy company website or SCC report. Do not use average herd test results

Section 23 – Wastage and replacements – This section measures wastage of whole herd from calving through to December and wastage of R2 heifers from 1st lactation to 2nd lactation. Cross reference checks can be made with cows calving, peak cows and cows grazed off

	Spring Herd	Autumn Herd	
Number or heifer calves reared as replacements			Used to calculate replacement rate
Number of in-calf R2 heifers at the start of season			Information can be obtained from Herd Summary Report or stock reconciliation in financial statement (if balance date is 31 May)
R2 heifer liveweight at 22 months (kg) (optional)			The target is 90% of mature weight at 22 months (pre-calving)
Number of cows and R2 heifers milking as at 31 Dec			This must be less than or the same as peak cows milked. Check December herd test.
Number of 1 st calvers (R2 heifers) at the start of season and still in the herd (and in-calf) at end of season			See Herd Summary Report or think of R2 that are in-calf and able to start the next season as R3's. Do not include empty heifers