Red Sky RAPID AUDIT

The Red Sky "rapid audit" process is documented to assist experienced users of Red Sky to rapidly review a Year of data. This process has been developed to raise "red flags" in relation to data that may require further analysis and/or follow-up questions of the farmer. Although this should not be considered an exhaustive audit procedure, if followed diligently it should assist in finalising Red Sky reports that will have few, if any, significant errors.

Potentially the most important focus of the audit should be the profit per cow and profit per hectare reports as these can highlight where revenue or expenses are likely to be either incorrect, allocated to the wrong code, or requiring capitalisation. The table below, which is explained in full nearer the end of this document, highlights the ratios in the profit per cow and profit per hectare report that should be reviewed and the ranges within which they should reasonably sit. The most important of these ratios and the ones most commonly incorrect are further highlighted in yellow.

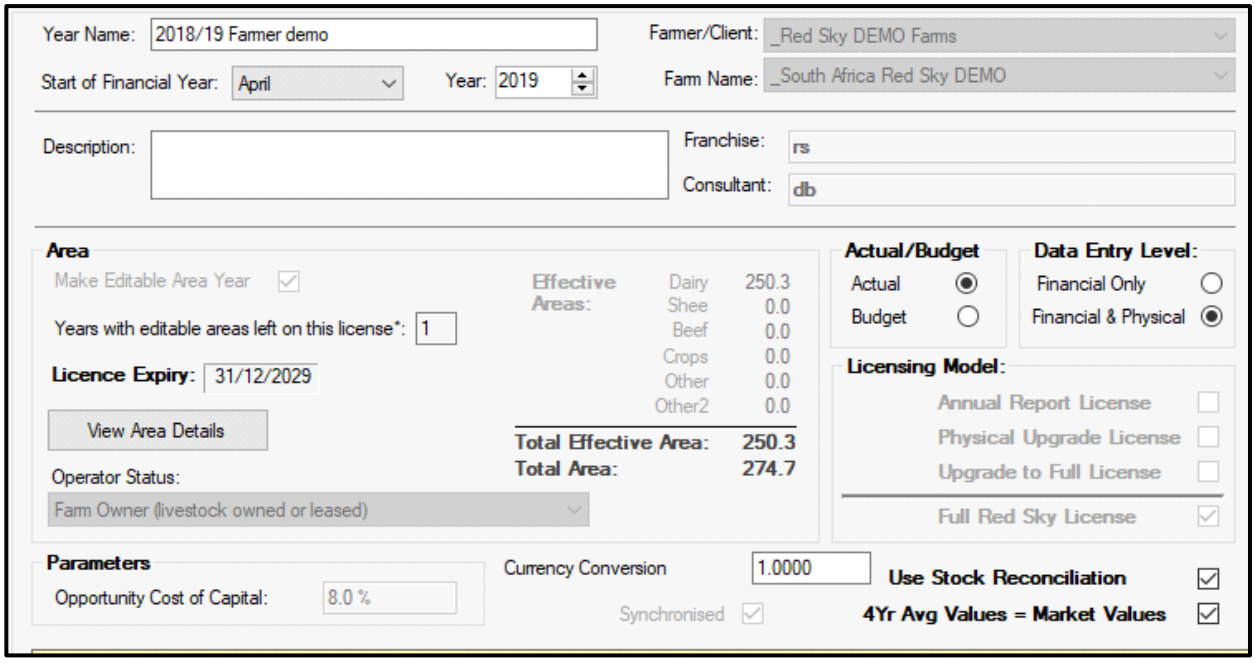
PER COW - South Africa	Benchmark	Maximum	Minimum
Revenue per Cow	**R -**	**R -**	**R -**
Livestock Revenue	2 370	**3 600**	**1 000**
Other Revenue	75	**260**	**0**
Expenses per Cow	**R -**	**R -**	**R -**
Animal Health	975	**1 800**	**400**
Breeding & Herd Testing	415	**770**	**150**
Dairy Shed Expenses	250	**480**	**100**
Electricity	480	**800**	**290**
Grazing / Support Area	870	**1 600**	**400**
Freight	10	**50**	**0**
Repairs & Maintenance	990	**1 640**	**470**
Vehicle Expenses (including fuel & oil)	1 300	**2 200**	**650**
Management & Staff Expenses	3 230	**4 500**	**2 300**
Depreciation	1 260	**2 000**	**600**
PER HECTARE - South Africa	**Benchmark**	**Maximum**	**Minimum**
Eexpenses per Hectare	**R -**	**R -**	**R -**
Administration (incl. professional fees)	1 350	**2 300**	**700**
Cropping (green feed)	550	**1 100**	**0**
Nitrogen	3 840	**5 800**	**1 500**
Phosphate & All Other Fertiliser	2 000	**3 500**	**1 200**
Irrigation	4 650	**8 000**	**0**
Pasture Maintenance & Renovation	2 200	**3 800**	**1 000**
Rates, Licenses, Levies & Insurance	1 800	**3 600**	**500**
Repairs & Maintenance	4 400	**8 800**	**2 000**
Depreciation	5 620	**9 000**	**2 400**

The balance of this document progressively works through the screens of Red Sky highlighting the key numbers to audit. There are notes relating to each screen and where appropriate, the relevant numbers highlighted with a **red** outline box. Above each screenshot in bold is the name and hierarchy of the tab, with the red tab name followed by the orange tab name and then the relevant yellow tab in capitals.

The first of these screenshots below is the **General** screen where the following should be checked:

- Year – is this the correct?
- Actual/Budget – is Actual selected?
- Use Stock Reconciliation – is this selected? If it is, then livestock revenue is more likely to be correct.
- 4Yr Avg Values = market Values – is this selected? In most cases there is no need to differentiate between 4yr average and market values of land and livestock, and there is less margin for error if this is selected.

GENERAL



Financial – Assets (Land & Buildings) – DAIRY

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
Dairy Land & Buildings Value at Start				
Farmed Dairy Hectares at Start	**248.6**	**248.6**	**229.8**	**352.6**
Owned Dairy Hectares at Start	211.2	197.2	213.5	237.6
Leased / Rented Dairy Hectares at Start	37.4	51.4	16.3	115.0
Owned Dairy Area Market Value at start	R 12,424,125	R 10,173,671	R 22,393,800	R 22,199,200
-Market Value per Dairy Hectare Owned	**R 58,836**	**R 51,578**	**R 104,888**	**R 93,444**
Owned Dairy Area 4-Year Rolling Average Value at Start	R 12,424,125	R 10,173,671	R 22,431,100	R 22,199,200
- 4-Year Rolling Average Value per Dairy Hectare Owned	R 58,836	R 51,578	R 105,062	R 93,444
Dairy Land & Buildings Value at End				
Farmed Dairy Hectares at End	**290.4**	**248.6**	**237.4**	**371.9**
Owned Dairy Hectares at End	211.2	197.2	216.0	242.6
Leased / Rented Dairy Hectares at End	79.2	51.4	21.3	129.3
Owned Dairy Area Market Value at End	R 13,093,986	R 11,605,276	R 24,223,900	R 23,524,200
-Market Value per Dairy Hectare Owned	**R 62,008**	**R 58,836**	**R 112,131**	**R 96,980**
Owned Dairy Area 4-Year Rolling Average Value at End	R 13,093,986	R 11,605,276	R 24,281,100	R 23,524,200
- 4-Year Rolling Average Value per Dairy Hectare Owned	R 62,008	R 58,836	R 112,396	R 96,980

- Are opening and closing values per hectare, including changes to these values, reasonable given your knowledge of the market?
- Is opening value per hectare for the present year the same as closing value from the previous year?

Financial – Assets (Plant & Other) – VEHICLES & MACHINERY

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
Vehicles	**R -**	**R -**	**R -**	**R -**
Dairy Vehicles Value at Start	1,017,158	1,087,713	2,574,090	3,777,730
Total Vehicles Value at Start	**1,017,158**	**1,087,713**	**2,574,090**	**3,777,730**
Dairy Vehicles Value at End	1,746,220	1,017,158	2,965,110	5,092,790
Total Vehicles Value at End	**1,746,220**	**1,017,158**	**2,965,110**	**5,092,790**
Plant and Machinery	**R -**	**R -**	**R -**	**R -**
Dairy Plant & Machinery Value at Start	1,222,942	558,555	2,058,780	2,485,370
Total Plant & Machinery Value at Start	**1,222,942**	**558,555**	**2,058,780**	**2,485,370**
Dairy Plant & Machinery Value at End	1,117,404	1,222,942	2,553,300	3,868,840
Total Plant & Machinery Value at End	**1,117,404**	**1,222,942**	**2,553,300**	**3,868,840**

- Are opening and closing values for vehicles and machinery, including changes to these values, reasonable given your knowledge of the farmer and any sales or purchases of machinery?
- Are opening values for the present year the same as closing values from the previous year

Financial – Assets (Plant & Other) – OTHER ASSETS

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
Other Assets	**R -**	**R -**	**R -**	**R -**
Dairy Other Assets Value at Start	0	0	4,237	0
Total Other Assets Value at Start	**0**	**0**	**4,237**	**0**
Dairy Other Assets Value at End	0	0	7,627	0
Total Other Assets Value at End	**0**	**0**	**7,627**	**0**
Leased & Rented Assets	**R -**	**R -**	**R -**	**R -**
Dairy Leased/Rented Assets Value at Start	6,725,999	5,760,544	5,524,260	19,240,400
Total Leased/Rented Assets Value at Start	**6,725,999**	**5,760,544**	**5,524,260**	**19,240,400**
Total of ALL Assets Value at Start for Expense Distribution Between Enterprises				
Dairy Percentage Value of ALL Assets Value at Start	100.0 %	100.0 %	100.0 %	100.0 %
Total All Assets Value at Start	**R 26,410,208**	**R 22,209,512**	**R 43,186,707**	**R 59,865,454**

- Is the value of relevant leased dairy assets (normally land and/or livestock) reasonable given your knowledge of the market? If these values are significantly inflated or deflated, then this will impact on return on capital and return on assets.
- Has the relevant lease (or rental) fees been entered under expenses (see next screenshot)?

Financial – Accounts Entry – EXPENSES

Lease - Equipment/Plant - Dairy	0	0	3,227	0
Lease - Land & Buildings - Dairy	193,307	198,304	110,300	837,537
Lease - Land (Grazing/Agistment) - Dairy	240,224	239,327	137,652	175,822
Lease - Stock - Dairy	0	0	126,255	7,006

- Has all relevant lease (or rental) fees been entered against their relevant asset type including land utilised for the milking cows versus land utilised solely as support (grazing of youngstock and crops)?

Livestock – RECONCILIATION – DAIRY

Only visible if 'Use Stock Reconciliation' is selected in the General screen. There is a separate document that outlines how to use this screen, which is highly recommended to all users.

DAIRY LIVESTOCK RECONCILIATION								
OPENING AGE GROUPS	**Opening Numbers**	**Opening Liveweight**	**Deaths & Losses**	**Purchases**	**Sales**	**Closing Numbers**	**Closing Liveweight**	**CLOSING AGE GI**
BREED / TYPE 1								**BREED / TYPE 1**
NATURAL INCREASE Heifer Calves	904	0.0	18	0	577	309	0.0	Rising 1-Year Heife
Rising 1-Year Heifers (1-12 months)	308	0.0	6	0	12	290	0.0	Rising 2-Year Heife
Rising 2-Year Heifers (13-24 mths)	281	0.0	25	0	228	910	0.0	Mixed Age Cows (2
Mixed Age Cows (25+ mths)	882	0.0						
BREED / TYPE 2								**BREED / TYPE 2**
NATURAL INCREASE Heifer Calves	0	0.0	0	0	0	0	0.0	Rising 1-Year Heife
Rising 1-Year Heifers (1-12 months)	0	0.0	0	0	0	0	0.0	Rising 2-Year Heife
Rising 2-Year Heifers (13-24 mths)	0	0.0	0	0	0	0	0.0	Mixed Age Cows (2
Mixed Age Cows (25+ mths)	0	0.0						
OPENING AGE GROUPS	**Opening Numbers**	**Opening Liveweight**	**Deaths & Losses**	**Purchases**	**Sales**	**Closing Numbers**	**Closing Liveweight**	**CLOSING AGE GI**
Breeding Bulls	9	0.0	1	3	2	9	0.0	Breeding Bulls
Other Livestock - Breed/Type 1	7	0.0	0	0	3	4	0.0	Other Livestock - B
Other Livestock - Breed/Type 2	0	0.0	0	0	0	0	0.0	Other Livestock - B
TOTAL	**1,487**	**0**	**50**	**3**	**822**	**1,522**	**0**	**TOTAL**
		Change Between Closing and Opening				**35**	**0.0**	

- Are the death rates reasonable given your knowledge of the farm?
- Are other entries (not visible in screenshot) for sale and purchase values, as well as reproductive rates, reasonable given your knowledge of the farm?

Livestock – Dairy Stock – COWS

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
MIXED AGE COWS (25+ months) - Breed/Type 1				
Number of Cows in Herd Breed Type 1	**1,075**	**1,020**	**950**	**1,768**
Number Owned at Start	1,079	960	850	1,676
Market Value Per Animal at Start	R 10,500	R 10,500	R 10,743	R 10,382
4-Year Rolling Average Value Per Animal at Start	R 10,500	R 10,500	R 10,743	R 10,382
Total Market Value at Start	R 11,329,500	R 10,074,750	R 9,137,170	R 17,398,400
Total 4-Year Rolling Average Value at Start	R 11,329,500	R 10,074,750	R 9,137,170	R 17,398,400
Number Owned at End	1,070	1,079	905	1,763
Market Value Per Animal at End	R 11,500	R 10,500	R 12,100	R 12,202
4-Year Rolling Average Value Per Animal at End	R 11,500	R 10,500	R 12,033	R 12,202
Total Market Value at End	R 12,305,000	R 11,329,500	R 10,950,300	R 21,509,700
Total 4-Year Rolling Average Value at End	R 12,305,000	R 11,329,500	R 10,889,500	R 21,509,700
Change in Total Market Value	**R 975,500**	**R 1,254,750**	**R 1,813,130**	**R 4,111,300**
Change in Total Closing Value	**(R 103,500)**	**R 1,254,750**	**R 655,873**	**R 1,061,557**
Change in 4-Year Rolling Average Value	R 975,500	R 1,254,750	R 1,752,330	R 4,111,300
Number Weeks Milking Cows Off Farm	0.0	0.0	0.5	2.0
Number Weeks Dry Cows Off Farm	0.0	0.0	2.5	2.0
Average Number Weeks On Farm	**52.0**	**52.0**	**49.0**	**48.1**
Default Average Grazing Cost per Cow per Week	R 120.00	R 120.00	R 120.00	R 120.00
Adjustment to Grazing Cost per Cow per Week	R 0.00	R 0.00	R 0.00	R 0.00
Actual Average Grazing Cost per Cow per Week	R 120.00	R 120.00	R 120.00	R 120.00
Annual Empty Cow Rate	**15.0 %**	**10.0 %**	**12.0 %**	**13.3 %**
Average Weight of Cows	**530**	**528**	**516**	**532**

- If the reconciliation was not utilised, then does it appear there were sufficient R2yr heifers at the start of year (see R2yr heifer screen) to allow for the change in cow numbers between opening and closing, and if not, were there sufficient purchases to make up the difference? If the numbers are not correct, this can have a significant impact on livestock revenue and overall business profitability.
- Are opening and closing values per head, including changes to these values, reasonable given your knowledge of the market and the farmers cows? ***This should be repeated for all livestock screens***.
- Is opening value per head for the present year the same as closing value from the previous year? ***This should be repeated for all livestock screens***.
- Were the cows grazed off the dairy/milking area at any time, either when dry or in milk, and has this been entered correctly?
- Is the average weight of cow correct, and was it entered correctly in previous years? This weight has a significant impact on pasture harvest and several other ratios.

Livestock – Dairy Stock – (R2yr) HEIFERS

- If the reconciliation was not utilised, then were there fewer R2yr heifers at the end of year than R1yr heifer numbers at the start of the year (see R1yr heifer screen)? If not, then additional (new) R2yr heifers have appeared from somewhere, either from purchases or from formerly R2yr heifers becoming R3yr heifers (having not calved) …or there is an error in the numbers. If the numbers are not correct, this can have a significant impact on livestock revenue and overall business profitability.
- Are opening and closing values per head, including changes to these values, reasonable given your knowledge of the market and the farmers cows? ***This should be repeated for all livestock screens***.
- Is opening value per head for the present year the same as closing value from the previous year? ***This should be repeated for all livestock screens***.
- Were the R2yr heifers grazed off the dairy/milking area at any time, and if so, then for how long? Double-check that the entries for "off farm" and "on farm" are not inverted. This time period on or off the farm has a significant impact on pasture harvest and several other ratios.
- Has the liveweight change while on farm been entered correctly? This would normally be between 4.0 kgs/week (0.57 kg/day) and 5.5 kgs/week (0.79 kg/day).

Livestock – Dairy Stock – (R2yr) HEIFERS

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
RISING 2-YEAR & OLDER HEIFERS (13+ months) - Breed/Type 1				
Total Number of Heifers Farmed	**272**	**235**	**326**	**484**
Number Owned at Start	277	193	312	487
Market Value Per Animal at Start	R 11,000	R 10,500	R 11,241	R 11,015
4-Year Rolling Average Value Per Animal at Start	R 11,000	R 10,500	R 11,237	R 11,015
Total Market Value at Start	R 3,041,500	R 2,026,500	R 3,510,440	R 5,366,830
Total 4-Year Rolling Average Value at Start	R 3,041,500	R 2,026,500	R 3,509,290	R 5,366,830
Number Owned at End	268	277	333	480
Market Value Per Animal at End	R 11,000	R 11,000	R 11,908	R 12,017
4-Year Rolling Average Value Per Animal at End	R 11,000	R 11,000	R 11,860	R 12,017
Total Market Value at End	R 2,942,500	R 3,041,500	R 3,961,800	R 5,770,170
Total 4-Year Rolling Average Value at End	R 2,942,500	R 3,041,500	R 3,945,910	R 5,770,170
Change in Total Market Value	**(R 99,000)**	**R 1,015,000**	**R 451,360**	**R 403,340**
Change in Total Closing Value	**(R 99,000)**	**R 918,500**	**R 242,119**	**(R 85,116)**
Change in 4-Year Rolling Average Value	(R 99,000)	R 1,015,000	R 436,620	R 403,340
Average Number Weeks Off Farm	0.0	27.0	43.8	32.9
Average Number Weeks On Farm	**52.0**	**25.0**	**8.2**	**19.1**
Liveweight Change While On Farm	**208.0**	**100.0**	**32.9**	**76.3**
Annual Pregnancy Rate	**95.0 %**	**87.5 %**	**90.5 %**	**93.1 %**

Livestock – Dairy Stock – (R1yr) HEIFER CALVES

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
RISING 1-YEAR HEIFERS (1-12 months) - Breed/Type 1				
Total Number of Yearlings Farmed	**218**	**233**	**293**	**459**
Number Owned at Start	192	274	291	433
Market Value Per Animal at Start	R 4,000	R 4,000	R 3,795	R 3,704
4-Year Rolling Average Value Per Animal at Start	R 4,000	R 4,000	R 3,795	R 3,704
Total Market Value at Start	R 766,000	R 1,096,000	R 1,102,470	R 1,602,380
Total 4-Year Rolling Average Value at Start	R 766,000	R 1,096,000	R 1,102,470	R 1,602,380
Number Owned at End	244	192	291	486
Market Value Per Animal at End	R 4,000	R 4,000	R 4,012	R 3,861
4-Year Rolling Average Value Per Animal at End	R 4,000	R 4,000	R 4,012	R 3,861
Total Market Value at End	R 974,000	R 766,000	R 1,166,660	R 1,875,020
Total 4-Year Rolling Average Value at End	R 974,000	R 766,000	R 1,166,660	R 1,875,020
Change in Total Market Value	**R 208,000**	**(R 330,000)**	**R 64,190**	**R 272,640**
Change in Total Closing Value	**R 208,000**	**(R 330,000)**	**R 919**	**R 204,942**
Change in 4-Year Rolling Average Value	R 208,000	(R 330,000)	R 64,190	R 272,640
Average Number Weeks Off Farm	51.0	27.0	50.2	51.0
Average Number Weeks On Farm	**1.0**	**25.0**	**1.8**	**1.0**
Liveweight Change While On Farm (excluding birth weight)	**5.0**	**125.0**	**9.1**	**5.0**

- Are opening and closing values per head, including changes to these values, reasonable given your knowledge of the market and the farmers cows? ***This should be repeated for all livestock screens***.
- Is opening value per head for the present year the same as closing value from the previous year? ***This should be repeated for all livestock screens***.
- Were the R1yr heifers grazed off the dairy/milking area at any time, and if so, then for how long? Double-check that the entries for "off farm" and "on farm" are not inverted. This time period on or off the farm has a significant impact on pasture harvest and several other ratios.
- Has the liveweight change while on farm been entered correctly? This would normally be between 4.0 kgs/week (0.57 kg/day) and 5.5 kgs/week (0.79 kg/day)?

Livestock – Production & Pricing – DAIRY

Actual Final Litre Price (c/litre)	481.88	464.21	484.81	484.47
Calculated Milk Revenue	**R 30,681,555**	**R 27,792,340**	**R 28,557,523**	**R 58,987,458**
Actual Milk Revenue	**R 30,681,555**	**R 27,792,340**	**R 28,556,510**	**R 58,987,458**

- Is the 'calculated milk revenue' reconciled with the 'actual milk revenue'? It is the 'calculated milk revenue' that is used in the reports so any variance would normally be related to revenue being accrued (i.e. some of the calculated revenue being received after the end of the financial year).

Feed – Dairy – CONCENTRATES

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
Grains, Pellets & Concentrates				
Opening Stock on Hand tAF = t As Fed	120.8	105.8	69.7	209.2
Opening Market Value R/tAF = R/t As Fed	R 3,781	R 3,025	R 3,189	R 3,504
Total Value at Start	R 456,669	R 319,894	R 222,336	R 732,981
Quantity of Feed Produced on Home Area (tAF)	0.0	0.0	0.0	0.0
Cost of Home Grown Feed (R/tAF)	R 0	R 0	R 0	R 0
Total Value of Home Grown Feed	R 0	R 0	R 0	R 0
Home Hectares Removed for Crop	0.0	0.0	0.0	0.0
Yield of Home Grown Crop per Hectare (tDM)	0.0	0.0	0.0	0.0
Average Number of Months Home Area Removed for Crop	8.0	8.0	0.0	0.0
Quantity of Feed Produced on Outside Owned/Leased/Rented Area (tAF)	0.0	0.0	47.7	0.0
Cost of Feed Grown on Outside Owned/Leased/Rented Area (R/tAF)	R 0	R 0	R 1,397	R 0
Total Value of Feed Grown on Outside Owned/Leased/Rented Area	R 0	R 0	R 66,703	R 0
Outside Owned/Leased/Rented Hectares Removed for Crop	0.0	0.0	5.5	0.0
Yield of Support Area Crop per Hectare (tDM)	0.0	0.0	8.7	0.0
Average Number of Months Outside Owned/Leased/Rented Area Removed for Crop	8.0	8.0	8.0	0.0
Quantity of Feed Purchased off Farm (tAF)	2,601.0	2,825.0	2,358.5	4,745.8
Cost of Purchased Feed (R/tAF)	R 3,577	R 3,781	R 3,513	R 3,534
Total Value of Purchased Feed	R 9,302,559	R 10,680,127	R 8,286,320	R 16,770,100
Calculated Value of Annual Feed Costs	**R 9,302,559**	**R 10,680,127**	**R 8,353,022**	**R 16,770,100**
Actual Value of Annual Feed Costs (excluding Milk Powder)	**R 9,302,559**	**R 10,680,127**	**R 8,354,880**	**R 16,770,100**
Closing Stock on Hand (tAF)	90.2	120.8	133.9	345.1
Closing Market Value (R/tAF)	R 3,577	R 3,781	R 2,860	R 3,308
Total Value at End	R 322,538	R 456,669	R 383,030	R 1,141,540
Quantity of Feed Sold From or Consumed Off Home Area (tAF)	46.5	357.8	357.2	517.9
Cost of Feed Sold From or Consumed Off Home Area (R/tAF)	R 3,581	R 3,669	R 3,460	R 3,594
Total Value of Feed Consumed Off Home Area	R 166,517	R 1,312,860	R 1,236,130	R 1,861,490
Average Time in Months Between Purchase Date and Feeding Date	0.5	0.5	0.5	0.5
Total Feed Used During Year (tAF)	**2,585.1**	**2,452.1**	**1,984.8**	**4,092.0**
Average Cost of Used Feed (R/tAF)	**R 3,602**	**R 3,771**	**R 3,488**	**R 3,549**
Total Value of Used Feed	R 9,311,667	R 9,245,850	R 6,922,715	R 14,520,876
Average Dry Matter Percentage	**90.0 %**	**90.0 %**	**89.5 %**	**89.0 %**
Average Energy Density (MJ ME/kgDM)	**12.0**	**12.0**	**12.0**	**12.0**
Percentage Wastage	**2.0 %**	**2.0 %**	**2.0 %**	**2.0 %**
Total Feed Consumed During Year (tAF)	**2,533.4**	**2,403.1**	**1,944.9**	**4,010.2**
Increase/(Decrease) in Value of Feed on Hand	(R 134,131)	R 136,775	R 160,694	R 408,559

- Is opening stock on hand and opening value per tonne for the present year the same as closing stock on hand and closing value per tonne from the previous year? ***This should be repeated for all feed/supplement screens***.
- Are opening and closing values per tonne, including differences in these values, reasonable given your knowledge of the market and the purchases made by the farmer? ***This should be repeated for all feed/supplement screens***.
- Is the quantity of concentrate consumed off the dairy area (or sold) appear reasonable given your understanding of the farmers production system? ***This should be repeated for all feed/supplement screens***.
- Is the total amount of feed used during the year and/or the total amount of feed consumed during the year appear reasonable given your understanding of the farmers production system? ***This should be repeated for all feed/supplement screens***.
- Is the average energy density of the feed and percentage wastage (and dry matter percent) appear reasonable given your understanding of the farmers production system? ***This should be repeated for all feed/supplement screens***.

Feed – Dairy – MAIZE SILAGE

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
Maize / Corn Silage				
Opening Stock on Hand (tDM)	3,469.0	3,713.0	1,823.4	3,575.0
Opening Market Value (R/tDM)	R 1,269	R 1,266	R 1,119	R 1,090
Total Value at Start	R 4,402,119	R 4,700,658	R 2,040,040	R 3,898,370
Quantity of Feed Produced on Home Area (tDM)	0.0	0.0	177.8	0.0
Cost of Home Grown Feed (R/tDM)	R 0	R 0	R 851	R 0
Total Value of Home Grown Feed	R 0	R 0	R 151,268	R 0
Home Hectares Removed for Crop	0.0	0.0	10.8	0.0
Yield of Home Grown Crop per Hectare (tDM)	0.0	0.0	16.5	0.0
Average Number of Months Home Area Removed for Crop	8.0	8.0	8.0	0.0
Quantity of Feed Produced on Outside Owned/Leased/Rented Area (tDM)	1,592.4	1,589.0	1,653.7	3,199.2
Cost of Feed Grown on Outside Owned/Leased/Rented Area (R/tDM)	R 1,297	R 1,269	R 1,067	R 1,065
Total Value of Feed Grown on Outside Owned/Leased/Rented Area	R 2,065,613	R 2,016,673	R 1,764,910	R 3,407,000
Outside Owned/Leased/Rented Hectares Removed for Crop	151.7	144.5	126.3	235.3
Yield of Support Area Crop per Hectare (tDM)	10.5	11.0	13.1	13.6
Average Number of Months Outside Owned/Leased/Rented Area Removed for Crop	8.0	8.0	8.0	8.0
Quantity of Feed Purchased off Farm (tDM)	0.0	0.0	102.9	282.3
Cost of Purchased Feed (R/tDM)	R 0	R 0	R 1,657	R 2,177
Total Value of Purchased Feed	R 0	R 0	R 170,589	R 614,541
Calculated Value of Annual Feed Costs	**R 2,065,613**	**R 2,016,673**	**R 2,086,767**	**R 4,021,541**
Actual Value of Annual Feed Costs	**R 2,065,613**	**R 2,016,673**	**R 2,086,770**	**R 4,021,550**
Closing Stock on Hand (tDM)	3,818.0	3,469.0	2,138.7	3,839.5
Closing Market Value (R/tDM)	R 1,293	R 1,269	R 1,078	R 1,138
Total Value at End	R 4,938,567	R 4,402,119	R 2,306,210	R 4,370,130
Quantity of Feed Sold From or Consumed Off Home Area (tDM)	30.5	289.5	552.0	1,124.2
Cost of Feed Sold From or Consumed Off Home Area (R/tDM)	R 1,269	R 1,266	R 1,107	R 1,080
Total Value of Feed Consumed Off Home Area	R 38,705	R 366,507	R 611,120	R 1,213,970
Average Time in Months Between Purchase Date and Feeding Date	3.0	3.0	3.0	3.0
Total Feed Used During Year (tDM)	**1,212.9**	**1,543.5**	**1,067.2**	**2,092.8**
Average Cost of Used Feed (R/tDM)	**R 1,372**	**R 1,345**	**R 1,272**	**R 1,239**
Total Value of Used Feed	R 1,663,553	R 2,076,639	R 1,357,315	R 2,592,037
Average Energy Density (MJ ME/kgDM)	**10.5**	**10.5**	**10.5**	**10.5**
Percentage Wastage	**17.5 %**	**17.5 %**	**17.1 %**	**14.9 %**
Total Feed Consumed During Year (tDM)	**1,000.6**	**1,273.4**	**885.0**	**1,781.0**
Increase/(Decrease) in Value of Feed on Hand	R 536,448	(R 298,539)	R 266,170	R 471,760

- Is opening stock on hand and opening value per tonne for the present year the same as closing stock on hand and closing value per tonne from the previous year? ***This should be repeated for all feed/supplement screens***.
- Are opening and closing values per tonne, including differences in these values, reasonable given your knowledge of the market and the purchases made by the farmer? ***This should be repeated for all feed/supplement screens***.
- Are any crop yields realistic? ***This should be repeated for all feed/supplement screens***.
- Is the quantity of maize silage consumed off the dairy area (or sold) appear reasonable given your understanding of the farmers production system? ***This should be repeated for all feed/supplement screens***.
- Is the total amount of feed used during the year and/or the total amount of feed consumed during the year appear reasonable given your understanding of the farmers production system? ***This should be repeated for all feed/supplement screens***.
- Is the average energy density of the feed and percentage wastage (and dry matter percent) appear reasonable given your understanding of the farmers production system? ***This should be repeated for all feed/supplement screens***.

Feed – Calc Dairy – CONSUMPTION

- Is pasture harvest reasonable given your knowledge of the farm?
- Is the percentage of pasture versus forage versus concentrate reasonable given your knowledge of the farm and compared to previous year's performance?

Feed – Calc Dairy – CONSUMPTION

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
PASTURE & SUPPLEMENTS CONSUMPTION				
Pasture Dry Matter Harvested per Hectare (tDM)	**12.88**	**9.69**	**11.59**	**14.60**
Adjustment to Pasture Dry Matter Harvested per Hectare (tDM)	0.00	0.00	0.00	0.00
Net Area for Pasture Harvest Calculation (Ha)	243.8	243.8	211.6	332.9
Pasture Megajoules Metabolisable Energy per kilogram Dry Matter	10.5	10.5	10.5	10.5
Estimated Percent Utilisation of Pasture	75.0 %	75.0 %	70.0 %	75.0 %
Estimated Pasture DM Grown per Hectare (tDM)	17.17	12.92	16.55	19.47
Mixed Age Cows				
Pasture as % of Total Consumed	**42.9 %**	**35.5 %**	**42.7 %**	**40.7 %**
Supplement as % of Total Consumed	57.1 %	64.5 %	57.3 %	59.3 %
Forage Supplement as % of Total Consumed	**15.6 %**	**23.0 %**	**20.5 %**	**21.7 %**
Concentrate Supplement as % of Total Consumed	**41.6 %**	**41.5 %**	**36.8 %**	**37.7 %**

Land & Adjustments – Land Details – PHYSICAL

Change in Pasture Cover over Year - Dairy (kgsDM/Ha)	**0**	**0**	**17**	**17**

- Does any change in pasture cover compared to the previous year appear reasonable?

Land & Adjustments – Land Details – IRRIGATION

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
DAIRY IRRIGATION WATER USE				
Irrigation - Dairy (incl. Dairy Young)	3=41-70%	3=41-70%	4=71-100%	4=71-100%
Effective Hectares Irrigated - Dairy	120.9	120.0	191.7	270.9
Percentage of Effective Hectares Irrigated	**49.6 %**	**49.2 %**	**87.6 %**	**81.4 %**
Percentage Increase in Pasture Production on Irrigation versus Dryland - Dairy	70.0 %	70.0 %	100.0 %	100.0 %
Estimated Dryland Pasture Dry Matter Harvested per Hectare (tDM/Ha)	**9.56**	**7.21**	**6.18**	**8.05**
Estimated Irrigated Pasture Dry Matter Harvested per Hectare (tDM/Ha)	**16.25**	**12.25**	**12.35**	**16.10**
Estimated Irrigated Perennial Pasture Dry Matter Harvested per Hectare (tDM/Ha)	16.25	12.25	12.35	16.10
Annual Megalitres Applied (100mm=1 ML/Ha) - Dairy	407.9	407.9	548.2	982.5
Total Useful Rainfall (mm) - Dairy	550	550	550	550
Predominant Type of Irrigation - Dairy	2=Spray	2=Spray	2=Spray	2=Spray

- Is the percentage of effective hectares irrigated sensible and is it no greater than 100%?
- Is the percentage increase in pasture production on irrigated versus dryland pasture reasonable given your knowledge of the farm?
- Has the amount of irrigation water applied been entered correctly in total megalitres (not per hectare), and is this reasonable given it will most often equate to 3-7 ML/ha = 300-700mm?
- Has total useful rainfall been entered correctly? This will most often be 250-650mm.

Reports – SUMMARY – DAIRY

Complete a general review of the Summary report looking for anomalies including major changes in business performance compared to previous years. Most often errors are likely to be identified in the profit per cow and per hectare reports.

Reports – PHYSICAL – DAIRY

Complete a general review of the Physical report looking for anomalies including major changes in farm, cow and feeding performance compared to previous years. In particular review the top section under "Pasture & Supplements" (see screenshot below) including:

- Is the split between dryland and irrigated pasture harvest per hectare reasonable?
- Is the percentage of pasture versus forage versus concentrate reasonable given your knowledge of the farm and compared to previous year's performance?
- Is the dry matter intake of the cows, in particular the split between pasture versus forage versus concentrate reasonable given your knowledge of the farm?

Reports – PHYSICAL – DAIRY

PASTURE & SUPPLEMENTS				
Pasture Dry Matter Harvested (tDM/Ha)	**12.88**	**9.69**	**11.59**	**14.60**
Estimated Dryland Pasture Harvest (tDM/Ha)	9.56	7.21	6.18	8.05
Estimated Irrigated Pasture Harvest (tDM/Ha)	16.25	12.25	12.35	16.10
Percentage Hectares Irrigated	**49.6 %**	**49.2 %**	**87.6 %**	**81.4 %**
Nitrogen Applied per Hectare	308.0	311.0	331.3	351.4
Total Grazed & Conserved Pasture (tDM/Ha)	12.88	9.69	11.59	14.60
Grazed Pasture (tDM/Ha)	12.88	9.69	11.35	14.48
Conserved Pasture (tDM/Ha)	0.00	0.00	0.23	0.12
Pasture as % of Total Consumed	**42.9 %**	**35.5 %**	**42.7 %**	**40.7 %**
Supplement as % of Total Consumed	57.1 %	64.5 %	57.3 %	59.3 %
- Forage as % of Total Consumed	15.6 %	23.0 %	20.5 %	21.7 %
- Concentrate as % of Total Consumed	41.6 %	41.5 %	36.8 %	37.7 %
Pasture Consumed Per Cow (estimated tDM)	2.44	2.00	2.43	2.49
Forage Consumed Per Cow (estimated tDM)	0.98	1.43	1.29	1.46
- Homegrown Forage Consumed (est tDM/cow)	0.97	1.22	1.07	1.14
- Imported Forage Consumed (est tDM/cow)	0.01	0.20	0.22	0.32
Concentrate Consumed Per Cow (estimated tAF)	2.21	2.18	1.95	2.15
Total Consumed Per Cow (estimated tDM)	**5.41**	**5.38**	**5.46**	**5.86**

Reports – PROFIT PER COW – DAIRY

Potentially the most important focus of the audit should be the profit per cow and profit per hectare reports as these can highlight where revenue or expenses are likely to be either incorrect, allocated to the wrong code, or requiring capitalisation.

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
REVENUE	**R -**	**R -**	**R -**	**R -**
Manufacturing Milk Sales	28,541	27,247	30,070	33,367
Quota/Contract/Dividends for Milk	0	0	0	0
Livestock Revenue	1,479	2,675	2,238	1,594
Other Revenue	0	1	103	264
Gross Revenue	**30,020**	**29,923**	**32,411**	**35,225**
EXPENSES	**R -**	**R -**	**R -**	**R -**
Administration (incl. professional fees)	326	321	302	235
Animal Health	662	701	1,017	1,099
Breeding & Herd Testing	412	514	425	368
Dairy Shed Expenses	225	295	264	248
Electricity	398	375	460	384
Feeds / Supplements (Total)	10,851	13,836	11,996	12,687
- Grazing / Support Area	524	699	868	821
- Cropping (green feed)	0	0	116	134
- Grains, Pellets & Concentrates	8,778	10,337	8,650	9,255
- Forages (incl. hay, silages, byproducts)	1,548	2,801	2,362	2,478
Fertiliser (Total)	701	774	1,286	1,280
- Nitrogen	456	496	812	775
- Phosphate & All Other Fertiliser	246	278	473	505
Freight	14	45	8	4
Irrigation	746	1,103	1,047	965
Pasture Maintenance & Renovation	224	337	458	333
Rates, Licenses, Levies & Insurance	232	194	391	348
Repairs & Maintenance	216	222	1,046	898
Vehicle Expenses (including fuel & oil)	906	846	1,336	1,011
Management & Staff Expenses	3,383	3,066	2,992	2,996
- Wages, Salaries & Employment Exp.	3,067	2,712	2,690	2,792
- Imputed Labour & Management	316	354	302	204
Depreciation	2,496	1,520	1,271	1,256
Gross Expenses	**21,794**	**24,151**	**24,299**	**24,112**

The tables above and below highlight the ratios in the profit per cow report that should be carefully reviewed and the ranges within which they should reasonably sit. The most important of these ratios and the ones most commonly incorrect are further highlighted in yellow below.

PER COW - South Africa	Benchmark	Maximum	Minimum
Revenue per Cow	**R -**	**R -**	**R -**
Livestock Revenue	2 370	**3 600**	**1 000**
Other Revenue	75	**260**	**0**
Expenses per Cow	**R -**	**R -**	**R -**
Animal Health	975	**1 800**	**400**
Breeding & Herd Testing	415	**770**	**150**
Dairy Shed Expenses	250	**480**	**100**
Electricity	480	**800**	**290**
Grazing / Support Area	870	**1 600**	**400**
Freight	10	**50**	**0**
Repairs & Maintenance	990	**1 640**	**470**
Vehicle Expenses (including fuel & oil)	1 300	**2 200**	**650**
Management & Staff Expenses	3 230	**4 500**	**2 300**
Depreciation	1 260	**2 000**	**600**

The following notes outline the most common reasons for the numbers in the table above being incorrect and outside the maximum and minimum range stated:

- **Livestock revenue** – opening and closing numbers are often provided by the farmer incorrectly, including numbers being identified in the wrong category (age group). ***Using the livestock reconciliation is highly recommended***. For numbers to be above the maximum then large numbers of sales would need to be at very high values per head (i.e. dispersal sale of registered herd). For numbers to be below the minimum then large numbers of replacement heifers would need to have been purchased rather than 'home grown'.
- **Other revenue** – the inclusion of non-dairy revenue is the main reason why this would be overstated.
- **Animal health** – the inclusion of breeding expenses, in particular related to veterinary costs/purchases, are the main reason why this would be overstated.
- **Breeding & herd testing** – the inclusion of breeding expenses under animal health, in particular related to veterinary costs/purchases, are the main reason why this would be understated.
- **Electricity** – the inclusion of irrigation electricity or non-dairy electricity are the main reason why this would be overstated.
- **Grazing/Support Area** – there are <u>three</u> main reasons for why this would be over or understated:
  a) The high value of owned land can result in a high imputed lease cost for owned grazing/support land which can result in this expense being overstated. This can be adjusted in the Land & Adjustments/Dairy Adjustments/Other-Support Adjustments screen.
  b) Over or understated real lease costs, including land lease costs not correctly being split between dairy/milking area and support area, can result in this grazing/support area expense being over or understated.
  c) The reallocation of costs from the dairy farm to grazing/support area under the Land & Adjustments-Dairy Adjustments-Other/Support Adjustments screen is incomplete or unsound.
- **Freight** – the inclusion of non-livestock freight is the main reason why this would be overstated.
- **Repairs & maintenance** – there are <u>five</u> main reasons for why this would be over or understated:
  a) Expenses that are of a capital nature (i.e. have a multi-year impact) are included and have not been capitalised, resulting in an overstatement of the costs.
  b) Expenses have not been incurred to maintain the assets of the business (e.g. due to financial pressure), resulting in an understatement of the costs.
  c) Vehicle expenses are included here rather than under 'vehicle Expenses'.
  d) Capitalisation of expenses have either been overdone or underdone, including flowing from previous years, resulting in an overstatement or understatement of the costs.

e) The reallocation of costs from the dairy farm to grazing/support area under the Land & Adjustments-Dairy Adjustments-Other/Support Adjustments screen is incomplete or unsound.

- **Vehicle expenses** – there are two main reasons for why this would be over or understated:
  a) Vehicle expenses are included under 'repairs and maintenance' rather than here, resulting in an understatement of the costs.
  b) Expenses that are of a capital nature (i.e. have a multi-year impact such as a full engine rebuild) are included and have not been capitalised, resulting in an overstatement of the costs.
  c) The reallocation of costs from the dairy farm to grazing/support area under the Land & Adjustments-Dairy Adjustments-Other/Support Adjustments screen is incomplete or unsound.
- **Management & staff expenses** – the exclusion of imputed owner/operator time and their extended family is the main reason why this would be understated.
- **Depreciation** – there are three main reasons for why this would be over or understated:
  a) Depreciation expenses have been omitted due to depreciable assets being held under related entities without depreciation on these assets being provided by the farmer.
  b) Accelerated depreciation expenses are included and have not been re-spread over multiple years, resulting in an overstatement of the costs.
  c) Capitalisation of expenses have either been overdone or underdone, including flowing from previous years, resulting in an overstatement or understatement of the costs.

Reports – PROFIT PER HECTARE – DAIRY

Potentially the most important focus of the audit should be the profit per cow and profit per hectare reports as these can highlight where revenue or expenses are likely to be either incorrect, allocated to the wrong code, or requiring capitalisation.

	2017/18 Farmer A	2016/17 Farmer A	2017/18 KZN Average	2017/18 KZN Top 10%
REVENUE	**R -**	**R -**	**R -**	**R -**
Manufacturing Milk Sales	142,486	121,611	133,077	185,176
Quota/Contract/Dividends for Milk	0	0	0	0
Livestock Revenue	7,385	11,938	9,903	8,845
Other Revenue	0	6	458	1,466
Gross Revenue	**149,872**	**133,555**	**143,437**	**195,487**
EXPENSES	**R -**	**R -**	**R -**	**R -**
Administration (incl. professional fees)	1,629	1,435	1,338	1,306
Animal Health	3,306	3,127	4,503	6,098
Breeding & Herd Testing	2,059	2,294	1,882	2,042
Dairy Shed Expenses	1,124	1,318	1,166	1,374
Electricity	1,988	1,672	2,035	2,131
Feeds / Supplements (Total)	54,170	61,755	53,087	70,410
- Grazing / Support Area	2,617	3,118	3,839	4,554
- Cropping (green feed)	0	0	515	742
- Grains, Pellets & Concentrates	43,824	46,135	38,280	51,363
- Forages (incl. hay, silages, byproducts)	7,728	12,503	10,453	13,751
Fertiliser (Total)	3,502	3,456	5,690	7,106
- Nitrogen	2,276	2,215	3,595	4,302
- Phosphate & All Other Fertiliser	1,226	1,241	2,095	2,804
Freight	70	202	37	22
Irrigation	3,726	4,925	4,631	5,353
Pasture Maintenance & Renovation	1,116	1,504	2,028	1,849
Rates, Licenses, Levies & Insurance	1,158	867	1,731	1,931
Repairs & Maintenance	1,078	990	4,630	4,985
Vehicle Expenses (including fuel & oil)	4,525	3,775	5,913	5,610
Management & Staff Expenses	16,888	13,684	13,242	16,625
- Wages, Salaries & Employment Exp.	15,309	12,103	11,905	15,492
- Imputed Labour & Management	1,579	1,581	1,337	1,133
Depreciation	12,462	6,786	5,625	6,972
Gross Expenses	**108,801**	**107,790**	**107,537**	**133,815**

The tables above and below highlight the ratios in the profit per hectare report that should be carefully reviewed and the ranges within which they should reasonably sit. The most important of these ratios and the ones most commonly incorrect are further highlighted in yellow below.

PER HECTARE - South Africa	Benchmark	Maximum	Minimum
Eexpenses per Hectare	**R -**	**R -**	**R -**
Administration (incl. professional fees)	1 350	**2 300**	**700**
Cropping (green feed)	550	**1 100**	**0**
Nitrogen	3 840	**5 800**	**1 500**
Phosphate & All Other Fertiliser	2 000	**3 500**	**1 200**
Irrigation	4 650	**8 000**	**0**
Pasture Maintenance & Renovation	2 200	**3 800**	**1 000**
Rates, Licenses, Levies & Insurance	1 800	**3 600**	**500**
Repairs & Maintenance	4 400	**8 800**	**2 000**
Depreciation	5 620	**9 000**	**2 400**

The following notes outline the most common reasons for the numbers in the table below being incorrect and outside the maximum and minimum range stated:

- **Administration** – the inclusion of non-dairy costs or 'corporate' costs like directors' fees, valuation costs or audit expenses, is the main reason why this would be overstated.
- **Cropping (green feed)** – there are three main reasons for why this would be over or understated:
  a) The inclusion of forage supplements here,
  b) The inclusion of green feed cropping expenses under forage supplements, are the main reasons why this would be over or understated.
  c) The reallocation of costs from the dairy farm to grazing/support area under the Land & Adjustments-Dairy Adjustments-Other/Support Adjustments screen is incomplete or unsound.
- **Nitrogen** – there are three main reasons for why this would be over or understated:
  a) The inclusion of nitrogen here that was applied for the growing of forage supplements or green feed crops is the main reason why this would be overstated.
  b) The inclusion of nitrogen that was applied as part of an incorporated mixed fertiliser under 'Phosphate & all other (non-N) fertiliser' is the main reason why this would be understated.
  c) The reallocation of costs from the dairy farm to grazing/support area under the Land & Adjustments-Dairy Adjustments-Other/Support Adjustments screen is incomplete or unsound.
- **Phosphate & all other (non-N) fertiliser** – there are three main reasons for why this would be over or understated:
  a) The inclusion of fertiliser here that was applied for the growing of forage supplements or green feed crops.
  b) The inclusion of nitrogen that was applied to pasture are the main reasons why this would be overstated.
  c) The reallocation of costs from the dairy farm to grazing/support area under the Land & Adjustments-Dairy Adjustments-Other/Support Adjustments screen is incomplete or unsound.
- **Irrigation** – there are four main reasons for why this would be over or understated:
  a) Electricity costs for irrigation have been included under general farm (dairy) electricity, resulting in an understatement of the costs.
  b) Repairs and maintenance costs for irrigation have been included under general (farm) repairs and maintenance, resulting in an understatement of the costs.
  c) Fuel costs such as diesel for a generator that powers an irrigator have been included under 'vehicle expenses (including fuel)', resulting in an understatement of the costs.
  d) Capitalisation of irrigation expenses have either been overdone or underdone, including flowing from previous years, resulting in an overstatement or understatement of the costs.

- **Pasture maintenance & renovation** – there are two main reasons for why this would be over or understated:
  a) Pasture costs such as seed or sprays have been included under forage supplements or green feed crops, resulting in an understatement of these costs.
  b) The reallocation of costs from the dairy farm to grazing/support area under the Land & Adjustments-Dairy Adjustments-Other/Support Adjustments screen is incomplete or unsound.
- **Rates, licenses, levies & insurance** – there are two main reasons for why this would be over or understated:
  a) Rates, licenses and/or insurance costs have not been separated from administration expenses and not entered under expenses against their own code, resulting in an understatement of these costs.
  b) Milk price has been entered as net of industry levies and no milk industry levies entered as an expense, resulting in an understatement of the costs.
- **Repairs & maintenance** – there are five main reasons for why this would be over or understated:
  a) Expenses that are of a capital nature (i.e. have a multi-year impact) are included and have not been capitalised, resulting in an overstatement of the costs.
  b) Expenses have not been incurred to maintain the assets of the business (e.g. due to financial pressure), resulting in an understatement of the costs.
  c) Vehicle expenses are included here rather than under 'vehicle Expenses'.
  d) Capitalisation of expenses have either been overdone or underdone, including flowing from previous years, resulting in an overstatement or understatement of the costs.
  e) The reallocation of costs from the dairy farm to grazing/support area under the Land & Adjustments-Dairy Adjustments-Other/Support Adjustments screen is incomplete or unsound.
- **Depreciation** – there are three main reasons for why this would be over or understated:
  a) Depreciation expenses have been omitted due to depreciable assets being held under related entities without depreciation on these assets being provided by the farmer.
  b) Accelerated depreciation expenses are included and have not been re-spread over multiple years, resulting in an overstatement of the costs.
  c) Capitalisation of expenses have either been overdone or underdone, including flowing from previous years, resulting in an overstatement or understatement of the costs.