Is it worth mentioning and explaining why in my dissertation I used -1 year in the existing query for reproductivity purposes? Or do I just say I used female reproductive status that year.

With the fixed reproductive status

1. Separate models Fecundity by female status

Milk: n=2299
Summer Yeld: n=664
Winter Yeld: n=680
True Yeld: n=1552
Naive: n=933

1.1 Without additional year, age and age squared

Results for Density

	Milk	**Summer yeld**	**True yeld**	**Winter yeld**	**Naive**
Hinds	-0.0207 (p=6.8 e-6) AIC 2894.3	-0.0176 (p=0.0116) AIC 495.9	-0.0089 (p=0.106) AIC 1299	-0.0139 (p=0.0155) AIC 918.9	-0.0100 (p=0.0258) AIC 1088.1
Adults	-0.0104 (p=0.00545) AIC 2905.2	-0.0126 (p=0.0023) AIC 493.6	0.0050 (p=0.110) AIC 1299.2	-0.0060 (p=0.1106) AIC 922.3	0.0027 (p=0.308) AIC 1092.4
Total	-0.0095 (p=0.00505) AIC 2905.0	-0.0107 (p=0.00597) AIC 495.3	0.0035 (p=0.232) AIC 1300.3	-0.0046 (p=0.206) AIC 923.3	0.0024 (p=0.312) AIC 1092.4
LU_Total	-0.0212 (p=0.0312) AIC 2908.0	-0.0289 (p=0.007) AIC 495.9	0.0140 (p=0.0826) AIC 1298.7	-0.0111 (p=0.257) AIC 923.6	0.0095 (p=0.150) AIC 1091.3

1.2 With Year as fixed effect Without age and age squared

Results for Density

	Milk	Summer yeld	True yeld	Winter yeld	Naive
Hinds	-0.0259 (p=1.58 e-6) AIC 2892.3	-0.02218 Failed to converge	-0.0026 (p=0.646) AIC 1291.8	-0.0141 (p=0.0252) AIC 920.9	-0.0068 (p=0.149) AIC 1087.2
Adults	-0.0159 (p=0.0015) AIC 2900.8	-0.01755 Failed to converge	-0.0030 (p=0.442) AIC 1291.5	-0.0116 (p=0.0102) AIC 919.1	-0.0023 (p=0.4799) AIC 1088.8
Total	-0.0116 (p=0.0009) AIC 2903.9	-0.01247 Failed to converge	-0.0022 (p=0.508) AIC 1291.6	-0.0070 (p=0.0659) AIC 922.5	-0.0076 (p=0.784) AIC 1089.2
LU_Total	-0.0365 (p=0.00147) AIC 2904.6	-0.04262 Failed to converge	-0.0077 (p=0.459) AIC 1291.5	-0.0258 (p=0.0338) AIC 921.3	=0.0024 (p=0.782) AIC 1089.2

Results for Year as fixed effect

	Milk (Year)	Summer yeld (Year)	True yeld (Year)	Winter yeld (Year)	Naive (Year)
Hinds	0.0188 (p=0.0481)	0.0197 Failed to converge	-0.0261 (p=0.0022)	0.0008 (p=0.936)	-0.0125 (p=0.0852)
Adults	-0.0257 (p=0.0095)	-0.0246 Failed to converge	-0.0327 (p=0.0022)	-0.0257 (p=0.0238)	-0.0205 (p=0.0201)
Total	-0.0167 (p=0.0668)	-0.01306 Failed to converge	-0.0307 (p=0.0127)	-0.0173 (p=0.0982)	-0.0177 (p=0.0255)
LU_Total	-0.0253 (p=0.0163)	-0.02454 Failed to converge	-0.0329 (p=0.00275)	-0.0244 (p=0.0406)	-0.0183 (p=0.0453)

1.3 With Year+Age and Age squared

Results for Density

	Milk	Summer yeld	True yeld	Winter yeld	Naive
Hinds	-0.0294 (p=5.08 e-7) AIC 2804.3	-0.0213 Failed to converge	-0.0017 (p=0.770) AIC 1206.1	-0.0148 (p=0.0279) AIC 906.7	-0.0074 (p=0.140) AIC 1064.9
Adults	-0.0180 (p=9.19 e-5) AIC 2813.9	-0.0169 Failed to converge	-0.0015 (p=0.714) AIC 1206.1	-0.0117 (p=0.0153) AIC 905.5	-0.00245 (p=487) AIC 1066.7
Total	-0.0132 (p=0.00055) AIC 2817.0	-0.0119 Failed to converge	-0.00057 (p=0.867) AIC 1206.2	-0.0069 (p=0.00011) AIC 908.7	-0.00078 (p=0.792) AIC 1067.1
LU_Total	-0.0413 (p=0.0010) AIC 2817.9	-0.0409 Failed to converge	-0.0027 (p=0.806) AIC 206.2	-0.0255 (p=0.0499) AIC 907.7	-0.0024 (p=0.797) AIC 1067.1

Results for Year as fixed effect

	Milk (Year)	Summer yeld (Year)	True yeld (Year)	Winter yeld (Year)	Naive (Year)
Hinds	0.0236 (p=0.0246)	0.0206 Failed to converge	-0.0198 (p=0.0230)	0.0019 (p=0.866)	-0.0130 (p=0.098)
Adults	-0.0267 (p=0.0148)	-0.0221 Failed to converge	-0.0233 (p=0.0336)	-0.0255 (p=0.0371)	-0.0217 (p=0.0215)
Total	-0.0167 (p=0.0981)	-0.0109 Failed to converge	-0.0216 (p=0.0273)	-0.0168 (p=0.1356)	-0.0188 (p=0.0269)
LU_Total	-0.0263 (p=0.0239)	-0.0220 Failed to converge	-0.0226 (p=0.0458)	-0.0238 (p=0.0062)	-0.0193 (p=0.0475)

2. Models with all female reproductive status

2.1 Without year as fixed effect, age and age squared

	Density Milk as reference		Summer yeld vs Milk	True yeld vs Milk	Winter yeld vs Milk	Naive vs Milk
Hinds	-0.0174 (p=5.88 e-8)	AIC 6621.3	2.321 (p<2e-16)	2.516 (p<2e-16)	0.243 (p=0.0199)	1.604 (p<2e-16)
Adults	-0.0050 (p=0.0610)	AIC 6643.9	2.324 (p<2e-16)	2.511 (p<2e-16)	0.255 (p=0.0193)	1.608 (p<2e-16)
Total	-0.0050 (p=0.0397)	AIC 6643.1	2.322 (p<2e-16)	2.509 (p<2e-16)	0.254 (p=0.0198)	1.606 (p<2e-16)
LU_Total	-0.0085 (p=0.229)	AIC 6645.8	2.323 (p<2e-16)	2.516 (p<2e-16)	0.243 (p=0.0199)	1.604 (p<2e-16)

2.2 With year as fixed effect, without age and age squared

	Density Milk as reference		DeerYear	Summer yeld vs Milk	True yeld vs Milk	Winter yeld vs Milk	Naive vs Milk
Hinds	-0.0177 (p=1.23 e-6)	AIC 6623.3	0.00110 (p=0.866)	2.321 (p<2e-16)	2.515 (p<2e-16)	0.254 (p=0.0198)	1.605 (p<2e-16)
Adults	-0.0011 (p=6.57 e-5)	AIC 6629.6	-0.0295 (p=3.03e-5)	2.322 (p<2e-16)	2.515 (p<2e-16)	0.254 (p=0.0197)	1.601 (p<2e-16)
Total	-0.0080 (p=0.00097)	AIC 6633.8	-0.0229 (p=0.00061)	2.319 (p<2e-16)	2.510 (p<2e-16)	0.251 (p=0.0215)	1.598 (p<2e-16)
LU_Total	-0.0258 (p=0.00097)	AIC 6633.9	-0.0290 (p=0.00013)	2.320 (p<2e-16)	2.512 (p<2e-16)	0.252 (p=0.0210)	1.599 (p<2e-16)

2.3 With age and age squared without year as fixed effect

Age and Age squared are significant in all models

	Density Milk as reference		Summer yeld vs Milk	True yeld vs Milk	Winter yeld vs Milk	Naive vs Milk
Hinds	-0.0183 (p=2.26 e-7)	AIC 6355.8	2.758 (p<2e-16)	2.913 (p<2e-16)	0.342 (p=0.0028)	2.649 (p<2e-16)
Adults	-0.00647 (p=0.0254)	AIC 6374.8	2.765 (p<2e-16)	2.917 (p<2e-16)	0.343 (p=0.00275)	2.641 (p<2e-16)
Total	-0.00605 (p=0.0217)	AIC 6374.5	2.763 (p<2e-16)	2.914 (p<2e-16)	0.342 (p=0.00284)	2.640 (p<2e-16)
LU_Total	-0.0118 (p=0.122)	AIC 6377.2	2.763 (p<2e-16)	2.916 (p<2e-16)	0.342 (p=0.00284)	2.639 (p<2e-16)

2.4 With age and age squared + year as fixed effect

Age and Age squared are significant in all models

	Density Milk as reference		DeerYear	Summer yeld vs Milk	True yeld vs Milk	Winter yeld vs Milk	Naive vs Milk
Hinds	-0.0199 (p=6.3 e-7)	AIC 6357.0	0.00627 (p=0.385)	2.760 (p<2e-16)	2.913 (p<2e-16)	0.343 (p=0.0027)	2.650 (p<2e-16)
Adults	-0.0122 (p=0.0001)	AIC 6365.0	-0.0277 (p=0.00047)	2.761 (p<2e-16)	2.913 (p<2e-16)	0.343 (p=0.00268)	2.641 (p<2e-16)
Total	-0.0087 (p=0.0013)	AIC 6369.1	-0.0205 (p=0.00605)	2.757 (p<2e-16)	2.910 (p<2e-16)	0.341 (p=0.00284)	2.638 (p<2e-16)
LU_Total	-0.0277 (p=0.00152)	AIC 6369.4	-0.0271 (p=0.00142)	2.759 (p<2e-16)	2.911 (p<2e-16)	0.342 (p=0.00285)	2.638 (p<2e-16)

3. Models with all female reproductive status + interactions

3.1 Without year as fixed effect, age and age squared

3.1.1 Hinds

Measurements	**AIC**	**Fixed Effects**	**Coeff.**	**Std Dev**	***p-value***
Logit (Fecundity)	**6627.1**	Intercept	3.039397	0.591174	2.73e-07
		Density			
		Hinds	-0.018823	0.003474	6.01e-08
		Reproductive status			
		Summer Yeld (vs Milk)	2.657193	1.215640	0.0288
		True Yeld (vs Milk)	1.546523	0.878234	0.0782
		Winter Yeld (vs Milk)	-0.241984	0.882514	0.7839
		Naïve (vs Milk)	0.693989	0.894318	0.4377
		Density x Reproductive Status			
		Hinds : Summer Yeld	-0.001897	0.006935	0.7844
		Hinds : True Yeld	0.005561	0.005000	0.2661
		Hinds : Winter Yeld	0.002881	0.005042	0.5676
		Hinds : Naïve	0.005247	0.005120	0.3054

3.1.2 Adults

Measurements	**AIC**	**Fixed Effects**	**Coeff.**	**Std Dev**	***p-value***
Logit (Fecundity)	**6622.6**	Intercept	1.992052	0.697113	0.004269
		Density			
		Adults	-0.008941	0.002905	0.002087
		Reproductive status			
		Summer Yeld (vs Milk)	3.288812	1.011874	0.001153
		True Yeld (vs Milk)	-0.392563	0.682467	0.565147
		Winter Yeld (vs Milk)	-0.267191	0.768927	0.728227
		Naïve (vs Milk)	-0.762852	0.721671	0.290483
		Density x Reproductive Status			
		Adults : Summer Yeld	-0.003794	0.004074	0.351658
		Adults : True Yeld	0.012203	0.002863	2.02e-5
		Adults : Winter Yeld	0.002283	0.003150	0.468551
		Adults : Naïve	0.009906	0.002998	0.000955

3.1.3 Total

Measurements	**AIC**	**Fixed Effects**	**Coeff.**	**Std Dev**	***p-value***
Logit (Fecundity)	**6628.5**	Intercept	2.299197	0.784543	0.003383
		Density			
		Total	-0.008115	0.002603	0.001828
		Reproductive status			
		Summer Yeld (vs Milk)	3.367206	1.182630	0.004410
		True Yeld (vs Milk)	-0.356311	0.788032	0.651158
		Winter Yeld (vs Milk)	-0.412630	0.895418	0.644925
		Naïve (vs Milk)	-0.997563	0.836646	0.233129
		Density x Reproductive Status			
		Total : Summer Yeld	-0.003356	0.003820	0.379644
		Total : True Yeld	0.009556	0.002624	0.000271
		Total : Winter Yeld	0.002246	0.002927	0.442812
		Total : Naïve	0.008627	0.002766	0.001816

3.1.4 LU_Total

Measurements	**AIC**	**Fixed Effects**	**Coeff.**	**Std Dev**	***p-value***
Logit (Fecundity)	**6628.1**	Intercept	1.478775	0.695636	0.033521
		Density			
		LU_Total	-0.017765	0.007601	0.019422
		Reproductive status			
		Summer Yeld (vs Milk)	3.290170	0.983800	0.000825
		True Yeld (vs Milk)	-0.027316	0.652740	0.966619
		Winter Yeld (vs Milk)	-0.185157	0.754244	0.806079
		Naïve (vs Milk)	-0.587498	0.694152	0.397356
		Density x Reproductive Status			
		LU_Total : Summer Yeld	-0.010150	0.010434	0.330674
		LU_Total : True Yeld	0.028168	0.007223	9.63e-5
		LU_Total : Winter Yeld	0.005006	0.008126	0.537883
		LU_Total : Naïve	0.024135	0.007592	0.001478

3.2 With year as fixed effect, without age and age squared

Age and Age Squared always significant
Deer Year insignificant for Hinds
Deer Year negative and significant for Adults, Total and LU_Total

3.2.1 Status as Main effect

	Density Milk as reference		**Summer yeld vs Milk**	**True yeld vs Milk**	**Winter yeld vs Milk**	**Naive vs Milk**
Hinds	-0.0192 (p=8.28 e-7)	AIC 6629.0	2.655 (p=0.0287)	1.544 (p=0.0785)	-0.245 (p=0.781)	0.689 (p=0.440)
Adults	-0.0150 (p=8.11 e-7)	AIC 6608.9	3.258 (p=0.0012)	-0.373 (p=0.583)	-0.290 (p=0.706)	-0.715 (p=0.320)
Total	-0.0109 (p=3.08 e-5)	AIC 6620.1	3.389 (p=0.0039)	-0.296 (p=0.707)	-0.383 (p=0.668)	-0.906 (p=0.278)
LU_Total	-0.0347 (p=3.02 e-5)	AIC 6616.5	3.290 (p=0.00088)	-0.025 (p=0.970)	-0.204 (p=0.787)	-0.554 (p=0.424)

3.2.2 Status as Interaction

Changes in Fecundity for each unit increase in Density

	Milk as reference	**Summer yeld vs Milk**	**True yeld vs Milk**	**Winter yeld vs Milk**	**Naive vs Milk**
Hinds	-0.0192 (p=8.28 e-07)	-0.0019 (p=0.786)	0.0056 (p=0.265)	0.0029 (p=0.564)	0.0053 (p=0.302)
Adults	-0.0150 (p=8.11 e-7)	-0.0037 (p=0.364)	0.0121 (p=2.09 e-5)	0.0024 (p=0.450)	0.0097 (p=0.0012)
Total	-0.0109 (p=3.08 e-5)	-0.0034 (p=0.365)	0.0094 (p=0.000359)	0.0021 (p=0.464)	0.0083 (p=0.0026)
LU_Total	-0.0347 (p=3.02 e-5)	-0.0099 (p=0.342)	0.0282 (p=9.15 e-5)	0.0052 (p=0.523)	0.0237 (p=0.0018)

3.3 With age and age squared without year as fixed effect

Age and Age Squared always significant

3.3.1 Status as Main effect

	Density Milk as reference		Summer yeld vs Milk	True yeld vs Milk	Winter yeld vs Milk	Naive vs Milk
Hinds	-0.0202 (p=1.19 e-7)	AIC 6361.0	2.71 (p=0.0314)	1.599 (p=0.085)	-0.164 (p=0.859)	1.632 (p=0.078)
Adults	-0.0109 (p=0.00047)	AIC 6354.7	3.261 (p=0.0019)	-0.093 (p=0.898)	-0.374 (p=0.642)	-0.068 (p=0.928)
Total	-0.0097 (p=0.00056)	AIC 6359.6	3.245 (p=0.0081)	-0.223 (p=0.789)	-0.566 (p=0.544)	-0.296 (p=0.734)
LU_Total	-0.0225 (p=0.00608)	AIC 6360.1	3.292 (p=0.00129)	-0.234 (p=0.736)	-0.307 (p=0.697)	0.138 (p=0.849)

3.3.2 Status as Interaction

Changes in Fecundity for each unit increase in Density

	Milk as reference	Summer yeld vs Milk	True yeld vs Milk	Winter yeld vs Milk	Naive vs Milk
Hinds	-0.0202 (p=1.19 e-7)	0.00034 (p=0.962)	0.00755 (p=0.154)	0.00296 (p=0.575)	0.00588 (p=0.267)
Adults	-0.0109 (p=0.00047)	-0.00185 (p=0.663)	0.0127 (p=2.93 e-5)	0.0031 (p=0.347)	0.0113 (p=0.0003)
Total	-0.0097 (p=0.00056)	-0.00150 (p=0.705)	0.0105 (p=0.000172)	0.0030 (p=0.318)	0.0097 (p=0.0007)
LU_Total	-0.0225 (p=0.00608)	-0.00536 (p=0.621)	0.0298 (p=0.000102)	0.00729 (p=0.390)	0.0275 (p=0.000495)

3.4 With age and age squared + year as fixed effect

Check whether year and age are sig

Age and Age Squared always very significant when included
Deer Year insignificant for Hinds
Deer Year negative and significant for Adults, Total and LU_Total

3.4.1 Status as Main effect

	Density Milk as reference		Summer yeld vs Milk	True yeld vs Milk	Winter yeld vs Milk	Naive vs Milk
Hinds	-0.0219 (p=2.62 e-7)	AIC 6362.2	2.70 (p=0.0314)	1.589 (p=0.086)	-0.180 (p=0.846)	1.613 (p=0.081)
Adults	-0.0165 (p=9.51 e-7)	AIC 6345.5	3.233 (p=0.0020)	-0.089 (p=0.902)	-0.394 (p=0.623)	-0.121 (p=0.987)
Total	-0.0121 (p=2.73 e-5)	AIC 6355.0	3.261 (p=0.0075)	-0.181 (p=0.829)	-0.545 (p=0.559)	-0.211 (p=0.808)
LU_Total	-0.0380 (p=3.80 e-5)	AIC 6352.6	3.267 (p=0.00136)	-0.227 (p=0.742)	-0.323 (p=0.681)	0.180 (p=0.804)

3.4.2 Status as Interaction

Changes in Fecundity for each unit increase in Density

	Milk as reference	Summer yeld vs Milk	True yeld vs Milk	Winter yeld vs Milk	Naive vs Milk
Hinds	-0.0219 (p=2.62 e-7)	0.00039 (p=0.957)	0.00761 (p=0.150)	0.00306 (p=0.561)	0.00599 (p=0.257)
Adults	-0.0165 (p=9.51 e-7)	-0.00176 (p=0.677)	0.0126 (p=2.94 e-5)	0.0032 (p=0.333)	0.0111 (p=0.0004)
Total	-0.0121 (p=2.73 e-5)	-0.00157 (p=0.691)	0.0103 (p=0.000216)	0.0030 (p=0.329)	0.0094 (p=0.00099)
LU_Total	-0.0380 (p=3.80 e-5)	-0.00515 (p=0.635)	0.0298 (p=9.58 e-5)	0.00747 (p=0.378)	0.0270 (p=0.0006)