Cow/Calf Programs Using TI59 Calculator

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Introduction

The use of programable calculators has increased from very little usage to enthusiasm. However, software or programs have not been developed as fast as hardware. The following programs were developed to aid in fulfilling the gap of software for the TI-59.

The programs are for cow-calf operations, in which information is generated for supplementation of cows on grass to feeder calf budget projections.

The first program described allows the inputs of cow weights on optional pasture compositions, then the calculation of nutrient requirement for four situations: pregnant nonlactating cow, pregnant last third, lactation 10 lb./day, and heavy lactation 20 lb./day. The program then calculates the percent composition of the supplement or, if you know the percentage of protein in the supplement, calculates the amount of supplement that should be fed daily.

The cow calf budget allows you to put in cost inputs for a cow-calf operation and calculates yearly cost and profit or loss.

The yearling heifer program takes the weight and expected gain and calculates energy, protein, calcium, and phosphorus needs. The program also allows the calculation of a complete ration.

The feeded cattle budget program allows cost inputs to give profit and loss projections, as well as breakeven. Detailed explanation of the program and steps necessary to the program are discussed in the following section.

Beef Cow Requirements With Supplement Calculated

1. 3 OP 17
2. Put program on magnetic card
3. Read in card
4. Place weight of cow in calculator Touch A
5. Answer prompts
   P—CP % protein of forage Touch R/S
   P—Ca % calcium of forage Touch R/S
   P—P % phosphorus Touch R/S
   IN Intake as % body weight Touch R/S
   SUP Pounds of supplement to be fed per day Touch R/S
6. Touch B get requirements for pregnancy (PG)
   Touch C get requirements for last 1/3 of pregnancy (L1/3)
   Touch D get requirements for lactating cow (LACT)
   Touch E get requirements for high lactating cow (H—LACT)
7. Touch R/S after each above in #6 to get difference between forage and requirement
8. Touch A' after #7 to get % protein, calcium, and phorphorus of supplement
9. Touch B' P—CP—CMSUP put in % protein of supplement Touch R/S Calculate pounds of supplement per day.

Output

```
 1000.      WT

P-CP
    4.
P-CA
  0.1
 P-P
 0.05
 IN
   2.
 SUP
   4.
 PG                L1/3                LACT                H-LACT
 0.87    CPLB      1.06    CPLB        1.90    CPLB        2.73    CPLB
12.11    CAGM     14.11    CAGM       26.11    CAGM       45.11    CAGM
10.09    P GM     11.76    P GM       21.75    P GM       37.58    P GM

NEED              NEED                NEED                NEED
 0.06    CPLB      0.25    CPLB        1.10    CPLB        1.92    CPLB
 3.02    CAGM      5.02    CAGM       17.02    CAGM       36.02    CAGM
 5.54    P GM      7.21    P GM       17.21    P GM       33.03    P GM

 SUP               SUP                 SUP                 SUP
 1.60     %CP      6.34     %CP       27.52     %CP       48.09     %CP
 0.17     %CA      0.28     %CA        0.94     %CA        1.99     %CA
 0.31     %P       0.40     %P         0.95     %P         1.82     %P
P-CP-CMSUP        P-CP-CMSUP          P-CP-CMSUP          P-CP-CMSUP
   20.                20.                 20.                 20.
 0.08     AMT      0.32     AMT        1.38     AMT        2.40     AMT
```

Program

```
000  76 LBL      051  25 CLR      101  12  12      151  95  =
001  11  A       052  69 OP       102  99 PRT      152  42 STO
002  42 STO      053  00  00      103  02  2       153  04  04
003  01  01      054  03  3       104  04  4       154  43 RCL
004  25 CLR      055  03  3       105  03  3       155  03  03
005  69 OP       056  02  2       106  01  1       156  65  ×
006  00  00      057  00  0       107  69 OP      157  93  .
007  04  4       058  01  1       108  02  02      158  08  8
008  03  3       059  05  5       109  69 OP      159  03  3
009  03  3       060  03  3       110  05  05      160  03  3
010  07  7       061  03  3       111  25 CLR     161  95  =
011  69 OP       062  69 OP       112  91 R/S     162  42 STO
012  04  04      063  02  02      113  42 STO     163  05  05
013  43 RCL      064  69 OP       114  06  06      164  03  3
014  01  01      065  05  05      115  99 PRT     165  03  3
015  69 OP       066  25 CLR      116  03  3       166  02  2
016  06  06      067  91 R/S      117  06  6       167  02  2
017  65  ×       068  42 STO      118  04  4       168  69 OP
018  93  .       069  10  10      119  01  1       169  02  02
019  04  4       070  99 PRT      120  03  3       170  69 OP
020  05  5       071  03  3       121  03  3       171  05  05
021  03  3
```

```
022  06   6
023  95   =
024  45  YX
025  93   .
026  07   7
027  05   5
028  95   =
029  42  STO
030  02   02
031  43  RCL
032  02   02
033  65   ×
034  93   .
035  01   1
036  02   2
037  05   5
038  05   5
039  95   =
040  75   -
041  93   .
042  02   2
043  02   2
044  02   2
045  95   =
046  42  STO
047  15   15
048  42  STO
049  03  *03
050  98  ADV
```

```
072  03   3
073  02   2
074  00   0
075  01   1
076  05   5
077  01   1
078  03   3
079  69  OP
080  02   02
081  69  OP
082  05   05
083  25  CLR
084  91  R/S
085  42  STO
086  11   11
087  99  PRT
088  03   3
089  03   3
090  02   2
091  00   0
092  03   3
093  03   3
094  69  OP
095  02   02
096  69  OP
097  05   05
098  25  CLR
099  91  R/S
100  42  STO
```

```
122  69  OP
123  02   02
124  69  OP
125  05   05
126  25  CLR
127  91  R/S
128  42  STO
129  07   07
130  99  PRT
131  00   0
132  91  R/S
133  76  LBL
134  12   B
135  93   .
136  00   0
137  00   0
138  04   4
139  01   1
140  03   3
141  65   ×
142  43  RCL
143  02   02
144  95   =
145  75   -
146  93   .
147  00   0
148  01   1
149  03   3
150  03   3
```

```
172  76  LBL
173  10  E'
174  25  CLR
175  69  OP
176  00   00
177  69  OP
178  02   02
179  01   1
180  05   5
181  03   3
182  03   3
183  02   2
184  07   7
185  01   1
186  04   4
187  69  OP
188  04   04
189  43  RCL
190  04   04
191  55   ÷
192  93   .
193  04   4
194  05   5
195  03   3
196  06   6
197  95   =
198  58  FIX
199  02   02
200  69  OP
```

```
420  01   1
421  05   5
422  03   3
423  07   7
424  69  OP
425  02   02
426  69  OP
427  05   05
428  61  GTO
429  10  E'
430  76  LBL
431  15   E
432  43  RCL
433  02   02
434  65   ×
435  93   .
436  00   0
437  00   0
438  07   7
439  04   4
440  00   0
441  95   =
442  85   +
443  93   .
444  05   5
445  00   0
446  08   8
447  08   8
448  95   =
449  42  STO
450  04   04
```

```
470  03   3
471  02   2
472  00   0
473  02   2
474  07   7
475  01   1
476  03   3
477  01   1
478  05   5
479  69  OP
480  02   02
481  03   3
482  07   7
483  00   0
484  00   0
485  00   0
486  00   0
487  00   0
488  00   0
489  00   0
490  00   0
491  69  OP
492  03   03
493  69  OP
494  05   05
495  25  CLR
496  69  OP
497  00   00
498  61  GTO
499  10  E'
500  76  LBL
```

```
520  03   3
521  69  OP
522  04   04
523  00   0
524  00   0
525  00   0
526  43  RCL
527  04   04
528  55   ÷
529  93   .
530  04   4
531  05   5
532  03   3
533  06   6
534  95   =
535  55   ÷
536  43  RCL
537  07   07
538  95   =
539  65   ×
540  01   1
541  00   0
542  00   0
543  95   =
544  58  FIX
545  02   02
546  69  OP
547  06   06
548  27  INV
549  58  FIX
550  06   6
```

```
570  95   =
571  65   ×
572  01   1
573  00   0
574  00   0
575  95   =
576  58  FIX
577  02   02
578  69  OP
579  06   06
580  06   6
581  01   1
582  03   3
583  03   3
584  69  OP
585  04   04
586  43  RCL
587  05   05
588  55   ÷
589  04   4
590  93   .
591  05   5
592  03   3
593  06   6
594  95   =
595  55   ÷
596  43  RCL
597  07   07
598  95   =
599  58  FIX
600  02   02
```

```
201  06   06
202  27  INV
203  58  FIX
204  01   1
205  05   5
206  01   1
207  03   3
208  02   2
209  02   2
210  03   3
211  00   0
212  69  OP
213  04   04
214  58  FIX
215  02   02
216  43  RCL
217  03   03
218  69  OP
219  06   06
220  27  INV
221  58  FIX
222  03   3
223  03   3
224  00   0
225  00   0
226  02   2
227  02   2
228  03   3
229  00   0
230  69  OP
231  04   04
232  58  FIX
233  02   02
234  43  RCL
235  05   05
236  69  OP
237  06   06
238  27  INV
239  58  FIX
240  25  CLR
241  69  OP
242  00   00
243  98  ADV
244  91  R/S
245  03   3
246  01   1
247  01   1
248  07   7
249  01   1
250  07   7
```

```
251  01   1
252  06   6
253  69  OP
254  02   02
255  69  OP
256  05   05
257  43  RCL
258  01   01
259  55   ÷
260  01   1
261  00   0
262  00   0
263  95   =
264  65   ×
265  43  RCL
266  06   06
267  95   =
268  55   ÷
269  02   2
270  93   .
271  02   2
272  95   =
273  42  STO
274  13   13
275  65   ×
276  43  RCL
277  10   10
278  95   =
279  55   ÷
280  01   1
281  00   0
282  00   0
283  95   =
284  75   -
285  43  RCL
286  04   04
287  95   =
288  94  +/-
289  42  STO
290  04   04
291  43  RCL
292  13   13
293  65   ×
294  43  RCL
295  11   11
296  95   =
297  65   ×
298  01   1
299  00   0
300  95   =
```

```
301  75   -
302  43  RCL
303  03   03
304  95   =
305  94  +/-
306  42  STO
307  03   03
308  43  RCL
309  13   13
310  65   ×
311  43  RCL
312  12   12
313  95   =
314  65   ×
315  01   1
316  00   0
317  95   =
318  75   -
319  43  RCL
320  05   05
321  95   =
322  94  +/-
323  42  STO
324  05   05
325  61  GTO
326  10  E'
327  76  LBL
328  13   C
329  43  RCL
330  02   02
331  65   ×
332  93   .
333  00   0
334  00   0
335  03   3
336  09   9
337  09   9
338  95   =
339  85   +
340  93   .
341  00   0
342  08   8
343  06   6
344  05   5
345  95   =
346  42  STO
347  04   04
348  43  RCL
349  15   15
350  85   +
```

```
351  02   2
352  95   =
353  42  STO
354  03   03
355  65   ×
356  93   .
357  08   8
358  03   3
359  03   3
360  95   =
361  42  STO
362  05   05
363  02   2
364  07   7
365  00   0
366  02   2
367  06   6
368  03   3
369  00   0
370  04   4
371  69  OP
372  02   02
373  69  OP
374  05   05
375  61  GTO
376  10  E'
377  76  LBL
378  14   D
379  43  RCL
380  02   02
381  65   ×
382  93   .
383  00   0
384  00   0
385  06   6
386  03   3
387  03   3
388  95   =
389  85   +
390  93   .
391  02   2
392  04   4
393  00   0
394  07   7
395  95   =
396  42  STO
397  04   04
398  43  RCL
399  15   15
400  85   +
```

```
601  69  OP
602  06   06
603  69  OP
604  00   00
605  25  CLR
606  27  INV
607  58  FIX
608  91  R/S
609  76  LBL
610  17  B'
611  03   3
612  03   3
613  02   2
614  00   0
615  01   1
616  05   5
617  03   3
618  03   3
619  02   2
620  00   0
621  69  OP
622  02   02
623  01   1
624  05   5
625  03   3
626  00   0
627  03   3
628  06   6
629  04   4
630  01   1
631  03   3
632  03   3
633  69  OP
634  03   03
635  69  OP
636  05   05
637  25  CLR
638  91  R/S
639  42  STO
640  16   16
641  99  PRT
642  01   1
643  03   3
644  03   3
645  00   0
646  03   3
647  07   7
648  69  OP
649  04   04
650  43  RCL
```

```
651  04   4
652  55   ÷
653  93   .
654  04   4
655  05   5
656  03   3
657  06   6
658  95   =
659  95   =
660  65   ×
661  01   1
662  00   0
663  00   0
664  95   =
665  42  STO
666  17   17
667  43  RCL
668  17   17
669  55   ÷
670  43  RCL
671  16   16
672  95   =
673  42  STO
674  18   18
675  58  FIX
676  02   02
677  69  OP
678  06   06
679  27  INV
680  58  FIX
681  25  CLR
682  69  OP
683  00   00
684  25  CLR
685  98  ADV
686  98  ADV
687  98  ADV
688  91  R/S
689  00   0
```

```
401  01   1
402  04   4
403  95   =
404  42  STO
405  03   03
406  43  RCL
407  03   03
408  65   ×
409  93   .
410  08   8
411  03   3
412  03   3
413  95   =
414  42  STO
415  05   05
416  02   2
417  07   7
418  01   1
419  03   3
```

```
451  43  RCL
452  15   15
453  85   +
454  03   3
455  03   3
456  95   =
457  42  STO
458  03   03
459  43  RCL
460  03   03
461  65   ×
462  93   .
463  08   8
464  03   3
465  03   3
466  95   =
467  42  STO
468  05   05
469  02   2
```

```
501  16  A'
502  03   3
503  06   6
504  04   4
505  01   1
506  03   3
507  03   3
508  69  OP
509  02   02
510  69  OP
511  05   05
512  25  CLR
513  69  OP
514  00   00
515  06   6
516  01   1
517  01   1
518  05   5
519  03   3
```

```
551  01   1
552  01   1
553  05   5
554  01   1
555  03   3
556  69  OP
557  04   04
558  43  RCL
559  03   03
560  55   ÷
561  04   4
562  05   5
563  03   3
564  93   .
565  06   6
566  95   =
567  55   ÷
568  43  RCL
569  07   07
```

Cow Calf Budget Program

1. 2 OP 17
2. Record program on magnetic card
3. Read in card
4. Touch A answer prompts

COC	cost of cow
COP	cost of pasture/month
%CC	%calf crop

WWT	weaning weight of calf
SMC	salt and mineral cost/month
PS/D	pounds of supplement per day fed
DOF	days fed supplement
C/T	cost per ton supplement
PH/D	pounds of hay per day fed
DOF	days fed hay
C/T	cost per ton
MC	miscellaneous cost
YOC	years to own cow
CV	cow value estimated
LC	Labor cost/month
ESP	expected sale price calf $/cwt
INT	interest percent

Output

```
CDC
 750.
CDP
   3.
%CC
  90.
WWT
 375.
SMC
   0.5
PS/D
   4.
DOF
  90.
C/T
 150.
PH/D
  15.
DOF
  60.
C/T
  75.
 MC
  10.
YOC
   7.
 CV
 350.
 LC
   2.
ESP
  80.
 INT
  12.
INC
      270.00    WWT
EXP
       36.00     PC
       33.75     HC
       27.00     SC
        6.00    SMC
       12.86     IC
       57.14    CDV
       10.00     MC
       24.00     LC
      206.75    TOT
 PL
       63.25
B/C
       68.92
```

Program

```
000  76 LBL
001  11  A
002  69 DP
003  00  00
004  25 CLR
005  01  1
006  05  5
007  03  3
008  02  2
009  01  1
010  05  5
011  69 DP
012  02  02
013  69 DP
014  05  05
015  25 CLR
016  91 R/S
017  42 STO
018  01  01
019  99 PRT
020  01  1
021  05  5
022  03  3
023  02  2
024  03  3
025  03  3
026  69 DP
027  02  02
028  69 DP
029  05  05
030  25 CLR
031  91 R/S
032  42 STO
033  02  02
034  99 PRT
035  06  6
036  01  1
037  01  1
038  05  5
039  01  1
040  05  5
041  69 DP
042  02  02
043  69 DP
044  05  05
045  25 CLR
046  91 R/S
047  42 STO
048  03  03
049  99 PRT
050  04  4
051  03  3
052  04  4
053  03  3
054  03  3
055  07  7
056  69 DP
057  02  02
058  69 DP
059  05  05
060  25 CLR
061  91 R/S
062  42 STO
063  04  04
064  99 PRT
065  03  3
066  06  6
067  03  3
068  00  0
069  01  1
070  05  5
071  69 DP
072  02  02
073  69 DP
074  05  05
075  25 CLR
076  91 R/S
077  42 STO
078  05  05
079  99 PRT
080  03  3
081  03  3
082  03  3
083  06  6
084  06  6
085  03  3
086  01  1
087  06  6
088  69 DP
089  02  02
090  69 DP
091  05  05
092  25 CLR
093  91 R/S
094  42 STO
095  06  06
096  99 PRT
097  01  1
098  06  6
099  03  3
100  02  2
101  02  2
102  01  1
103  69 DP
104  02  02
105  69 DP
106  05  05
107  25 CLR
108  91 R/S
109  42 STO
110  07  07
111  99 PRT
112  01  1
113  05  5
114  06  6
115  03  3
116  03  3
117  07  7
118  69 DP
119  02  02
120  69 DP
121  05  05
122  25 CLR
123  91 R/S
124  42 STO
125  08  08
126  99 PRT
127  03  3
128  03  3
129  02  2
130  03  3
131  06  6
132  03  3
133  01  1
134  06  6
135  69 DP
136  02  02
137  69 DP
138  05  05
139  25 CLR
140  91 R/S
141  42 STO
142  09  09
143  99 PRT
144  01  1
145  06  6
146  03  3
147  02  2
148  02  2
149  01  1
150  69 DP
151  02  02
152  69 DP
153  05  05
154  25 CLR
155  91 R/S
156  42 STO
157  10  10
158  99 PRT
159  01  1
160  05  5
161  06  6
162  03  3
163  03  3
164  07  7
165  69 DP
166  02  02
167  69 DP
168  05  05
169  25 CLR
170  91 R/S
171  42 STO
172  11  11
173  99 PRT
174  03  3
175  00  0
176  01  1
177  05  5
178  69 DP
179  02  02
180  69 DP
181  05  05
182  25 CLR
183  91 R/S
184  42 STO
185  12  12
186  99 PRT
187  04  4
188  05  5
189  03  3
190  02  2
191  01  1
192  05  5
193  69 DP
194  02  02
195  69 DP
196  05  05
197  25 CLR
198  91 R/S
199  42 STO
200  13  13
201  99 PRT
202  01  1
203  05  5
204  04  4
205  02  2
206  69 DP
207  02  02
208  69 DP
209  05  05
210  25 CLR
211  91 R/S
212  42 STO
213  14  14
214  99 PRT
215  02  2
216  07  7
217  01  1
218  05  5
219  69 DP
220  02  02
221  69 DP
222  05  05
223  25 CLR
224  91 R/S
225  42 STO
226  23  23
227  99 PRT
228  43 RCL
229  23  23
230  65  ×
231  01  1
232  02  2
233  95  =
234  42 STO
235  23  23
236  01  1
237  07  7
238  03  3
239  06  6
240  03  3
241  03  3
242  69 DP
243  02  02
244  69 DP
245  05  05
246  25 CLR
247  91 R/S
248  42 STO
249  15  15
250  99 PRT
251  02  2
252  04  4
253  03  3
254  01  1
255  03  3
256  07  7
257  69 DP
258  02  02
259  69 DP
260  05  05
261  25 CLR
262  91 R/S
263  42 STO
264  16  16
265  99 PRT
266  69 DP
267  00  00
268  25 CLR
269  02  2
270  04  4
271  03  3
272  01  1
273  01  1
274  05  5
275  69 DP
276  01  01
277  69 DP
278  05  05
279  58 FIX
280  02  02
281  43 RCL
282  04  04
283  65  ×
284  53  (
285  43 RCL
286  15  15
287  55  ÷
288  01  1
289  00  0
290  00  0
291  54  )
292  95  =
293  65  ×
294  53  (
295  43 RCL
296  03  03
297  55  ÷
298  01  1
299  00  0
300  00  0
301  54  )
302  95  =
303  42 STO
304  22  22
305  04  4
306  03  3
307  04  4
308  03  3
309  03  3
310  07  7
311  69 DP
312  04  04
313  43 RCL
314  22  22
315  69 DP
316  06  06
317  69 DP
318  00  00
319  25 CLR
320  01  1
321  07  7
322  04  4
323  04  4
324  03  3
325  03  3
326  69 DP
327  01  01
328  69 DP
329  05  05
330  43 RCL
331  02  02
332  65  ×
333  01  1
334  02  2
335  95  =
336  42 STO
337  02  02
338  03  3
339  03  3
340  01  1
341  05  5
342  69 DP
343  04  04
344  43 RCL
345  02  02
346  69 DP
347  06  06
348  02  2
349  03  3
350  01  1
351  05  5
352  69 DP
353  04  04
354  43 RCL
355  09  09
356  65  ×
357  43 RCL
358  10  10
359  65  ×
360  53  (
361  43 RCL
362  11  11
363  55  ÷
364  02  2
365  00  0
366  00  0
367  00  0
368  54  )
369  95  =
370  42 STO
371  17  17
372  69 DP
373  06  06
374  03  3
375  06  6
376  01  1
377  05  5
378  69 DP
379  04  04
380  43 RCL
381  06  06
382  65  ×
383  43 RCL
384  07  07
385  65  ×
386  53  (
387  43 RCL
388  08  08
389  55  ÷
390  02  2
391  00  0
392  00  0
393  00  0
394  54  )
395  95  =
396  42 STO
397  18  18
398  69 DP
399  06  06
400  03  3
401  06  6
402  03  3
403  00  0
404  01  1
405  05  5
406  69 DP
407  04  04
408  43 RCL
409  05  05
451  04  04
452  53  (
453  43 RCL
454  01  01
455  75  -
456  43 RCL
457  14  14
458  54  )
459  55  ÷
501  43 RCL
502  18  18
503  85  +
504  43 RCL
505  05  05
506  85  +
507  43 RCL
508  19  19
509  85  +
551  01  1
552  05  5
553  69 DP
554  01  01
555  69 DP
556  05  05
557  43 RCL
558  21  21
559  55  ÷
```

```
410  65  ×        460  43 RCL      510  43 RCL      560  53  (
411  01  1        461  13  13      511  20  20      561  43 RCL
412  02  2        462  95  =       512  85  +       562  04  04
413  95  =        463  42 STO      513  43 RCL      563  65  ×
414  42 STO       464  19  19      514  12  12      564  53  (
415  05  05       465  69 DP       515  85  +       565  43 RCL
416  69 DP        466  06  06      516  43 RCL      566  15  15
417  06  06       467  03  3       517  23  23      567  55  ÷
418  02  2        468  00  0       518  95  =       568  01  1
419  04  4        469  01  1       519  42 STO      569  00  0
420  01  1        470  05  5       520  21  21      570  00  0
421  05  5        471  69 DP       521  69 DP       571  54  )
422  69 DP        472  04  04      522  06  06      572  54  )
423  04  04       473  43 RCL      523  27 INV      573  95  =
424  43 RCL       474  12  12      524  58 FIX      574  65  ×
425  01  01       475  69 DP       525  69 DP       575  01  1
426  65  ×        476  06  06      526  00  00      576  00  0
427  53  (        477  02  2       527  25 CLR      577  00  0
428  43 RCL       478  07  7       528  03  3       578  95  =
429  16  16       479  01  1       529  03  3       579  58 FIX
430  55  ÷        480  05  5       530  02  2       580  02  02
431  01  1        481  69 DP       531  07  7       581  99 PRT
432  00  0        482  04  04      532  69 DP       582  27 INV
433  00  0        483  43 RCL      533  01  01      583  58 FIX
434  54  )        484  23  23      534  69 DP       584  98 ADV
435  95  =        485  69 DP       535  05  05      585  98 ADV
436  55  ÷        486  06  06      536  43 RCL      586  98 ADV
437  43 RCL       487  03  3       537  22  22      587  98 ADV
438  13  13       488  07  7       538  75  -       588  91 R/S
439  95  =        489  03  3       539  43 RCL      589  00  0
440  42 STO       490  02  2       540  21  21      590  00  0
441  20  20       491  03  3       541  95  =
442  69 DP        492  07  7       542  58 FIX
443  06  06       493  69 DP       543  02  02
444  01  1        494  04  04      544  99 PRT
445  05  5        495  43 RCL      545  27 INV
446  01  1        496  02  02      546  58 FIX
447  06  6        497  85  +       547  01  1
448  04  4        498  43 RCL      548  04  4
449  02  2        499  17  17      549  06  6
450  69 DP        500  85  +       550  03  3
```

Yearling heifer program

1. Record program on magnetic card
2. Read in side 1 and side 2
3. Place weight of yearling heifer Touch A
4. Place gain expected, including fetus gain
   Prints out

NEM	net energy maintenance per day
NEG	net energy of gain per day
CPLB	pounds of protein per day
CAGM	grams of calcium per day
PGM	grams of phosphorus per day

5. Touch B
   INTAKE % BW intake as percent body weight for lot feeding Touch R/S
6. Prints out

NUTR	%
CPLB	% protein for diet
CAGM	% calcium for diet
PGM	% phosphorus for diet

Output

```
850.      WT
 1.4    GAIN

6.71     NEM

1.66     NEG

1.84    CPLB

19.68   CAGM

16.34    PGM
```

```
INTAKE %BW

      2.

NUTR     %
  10.83   CPLB

   0.26   CAGM

   0.21    PGM
```

Program

```
000  76 LBL
001  11  A
002  42 STO
003  01  01
004  69 DP
005  00  00
006  04  4
007  03  3
008  03  3
009  07  7
010  69 DP
011  04  04
012  43 RCL
013  01  01
014  69 DP
015  06  06
016  91 R/S
017  42 STO
018  02  02
019  69 DP
020  00  00
021  02  2
022  02  2
023  01  1
024  03  3
025  02  2
026  04  4
027  03  3
028  01  1
029  69 DP
030  04  04
031  43 RCL
032  02  02
033  69 DP
034  06  06
035  98 ADV
036  43 RCL
037  01  01
038  55  ÷
039  02  2
040  93  .
041  02  2
042  95  =
043  45 YX
044  93  .
045  07  7
046  05  5
047  95  =
048  42 STO
049  10  10
050  65  ×

051  93  .
052  00  0
053  07  7
054  07  7
055  95  =
056  42 STO
057  15  15
058  00  0
059  43 RCL
060  02  02
061  55  ÷
062  02  2
063  93  .
064  02  2
065  95  =
066  42 STO
067  18  18
068  65  ×
069  93  .
070  00  0
071  05  5
072  06  6
073  00  0
074  03  3
075  95  =
076  85  +
077  93  .
078  00  0
079  00  0
080  06  6
081  08  8
082  04  4
083  65  ×
084  53  (
085  43 RCL
086  18  18
087  65  ×
088  43 RCL
089  18  18
090  54  )
091  95  =
092  65  ×
093  43 RCL
094  10  10
095  95  =
096  65  ×
097  53  (
098  53  (
099  43 RCL
100  18  18

101  65  ×
102  93  .
103  08  8
104  01  1
105  54  )
106  75  -
107  93  .
108  00  0
109  02  2
110  54  )
111  95  =
112  42 STO
113  19  19
114  43 RCL
115  10  10
116  65  ×
117  93  .
118  00  0
119  00  0
120  04  4
121  01  1
122  03  3
123  95  =
124  75  -
125  93  .
126  00  0
127  01  1
128  03  3
129  03  3
130  95  =
131  42 STO
132  16  16
133  43 RCL
134  18  18
135  65  ×
136  93  .
137  07  7
138  05  5
139  95  =
140  85  +
141  93  .
142  00  0
143  01  1
144  03  3
145  95  =
146  42 STO
147  04  04
148  43 RCL
149  04  04
150  85  +

151  43 RCL
152  16  16
153  95  =
154  65  ×
155  02  2
156  93  .
157  02  2
158  95  =
159  42 STO
160  08  08
161  43 RCL
162  10  10
163  65  ×
164  93  .
165  01  1
166  02  2
167  05  5
168  05  5
169  95  =
170  75  -
171  93  .
172  02  2
173  02  2
174  02  2
175  95  =
176  42 STO
177  05  05
178  43 RCL
179  18  18
180  65  ×
181  01  1
182  07  7
183  93  .
184  05  5
185  95  =
186  75  -
187  02  2
188  93  .
189  01  1
190  07  7
191  95  =
192  42 STO
193  06  06
194  43 RCL
195  05  05
196  85  +
197  43 RCL
198  06  06
199  95  =
200  42 STO

201  09  09
202  69 DP
203  00  00
204  03  3
205  01  1
206  01  1
207  07  7
208  03  3
209  00  0
210  69 DP
211  04  04
212  58 FIX
213  02  02
214  43 RCL
215  15  15
216  69 DP
217  06  06
218  27 INV
219  58 FIX
220  98 ADV
221  69 DP
222  00  00
223  03  3
224  01  1
225  01  1
226  07  7
227  02  2
228  02  2
229  69 DP
230  04  04
231  58 FIX
232  02  02
233  43 RCL
234  19  19

251  04  04
252  58 FIX
253  02  02
254  43 RCL
255  08  08
256  69 DP
257  06  06
258  27 INV
259  58 FIX
260  98 ADV
261  69 DP
262  00  00
263  01  1
264  05  5
265  01  1
266  03  3
267  02  2
268  02  2
269  03  3
270  00  0
271  69 DP
272  04  04
273  58 FIX
274  02  02
275  43 RCL
276  09  09
277  69 DP
278  06  06
279  27 INV
280  58 FIX
281  98 ADV
282  43 RCL
283  09  09
284  65  ×

301  58 FIX
302  02  02
303  43 RCL
304  07  07
305  69 DP
306  06  06
307  27 INV
308  58 FIX
309  98 ADV
310  98 ADV
311  98 ADV
312  25 CLR
313  91 R/S
314  76 LBL
315  12  B
316  69 DP
317  00  00
318  02  2
319  04  4
320  03  3
321  01  1
322  03  3
323  07  7
324  01  1
325  03  3
326  02  2
327  06  6
328  69 DP
329  01  01
330  01  1
331  07  7
332  00  0
333  00  0
334  06  6

351  69 DP
352  00  00
353  03  3
354  01  1
355  04  4
356  01  1
357  03  3
358  07  7
359  03  3
360  05  5
361  00  0
362  00  0
363  69 DP
364  02  02
365  06  6
366  01  1
367  69 DP
368  03  03
369  69 DP
370  05  05
371  43 RCL
372  11  11
373  55  ÷
374  01  1
375  00  0
376  00  0
377  95  =
378  65  ×
379  43 RCL
380  01  01
381  95  =
382  42 STO
383  12  12
384  43 RCL
```

```
235  69 □P      285  93  .      335  01   1      385  08  08
236  06  06     286  08  8      336  01   1      386  55  ÷
237  27 INV     287  03  3      337  04   4      387  43 RCL
238  58 FIX     288  95  =      338  04   4      388  12  12
239  98 ADV     289  42 STO     339  03   3      389  95  =
240  69 □P      290  07  07     340  69 □P      390  65  ×
241  00  00     291  69 □P      341  02  02     391  01   1
242  01   1     292  00  00     342  69 □P      392  00   0
243  05   5     293  03   3     343  05  05     393  00   0
244  03   3     294  03   3     344  98 ADV     394  95  =
245  03   3     295  02   2     345  25 CLR     395  42 STO
246  02   2     296  02   2     346  91 R/S     396  08  08
247  07   7     297  03   3     347  42 STO     397  43 RCL
248  01   1     298  00   0     348  11  11     398  09  09
249  04   4     299  69 □P      349  99 PRT     399  55  ÷
250  69 □P      300  04  04     350  98 ADV     400  04   4
                                               401  93  .
                                               402  05   5
                                               403  03   3
                                               404  06   6
                                               405  95  =
                                               406  55  ÷
                                               407  43 RCL
                                               408  12  12
                                               409  95  =
                                               410  42 STO
                                               411  09  09
                                               412  61 GTO
                                               413  02  02
                                               414  40  40
                                               415  98 ADV
                                               416  98 ADV
                                               417  91 R/S
                                               418  00   0
                                               419  00   0
                                               420  00   0
                                               421  00   0
                                               422  00   0
                                               423  00   0
                                               424  00   0
```

Feeder Calf Budget

1. 3 OP 17
2. Record program on magnetic card
3. Read cards 1, 2, and 3
4. Touch A answer prompts Touch R/S after each entry

Worksheet
WHEAT PASTURE BUDGET ANALYSIS
Texas Agricultural Extension Service

Fill in your actual costs or estimates for the following:

1. Average Payweight ..... _____ lb.
2. Cost Per Cwt. (Delivered) ..... $_____
3. Pasture Cost Per Cwt. Per Month ... $
4. Months on Pasture ..... mo.
5. Vet., Processing Cost Per Head ..... $_____
6. Expected % Death Loss ..... _____ %
7. Labor Cost Per Head Per Month .... $_____
8. Salt and Mineral Cost Per Head ..... $_____
9. Pounds of Hay Fed Per Head ..... _____ lb.
10. Cost Per Ton of Hay ..... $_____
11. Expected Average Daily Gain ..... _____ lb.
12. Pounds of Supplemental Feed Fed Per Head Per Day ..... _____ lb.
13. No. of Days Fed Supplemental Feed . _____ days
14. Expected Pounds of Supplemental Feed Per Pound of Additional Gain ..... _____ lb.
15. Cost Per Ton of Supplemental Feed .. $_____
16. Interest Rate on Borrowed Money ... _____ %
17. Expected Sell Price Per Cwt. (or Futures Quote for Delivery Month Less Basis) ..... $_____
18. Percent Shrink on Sale Weight ..... _____ %
19. Marketing Cost Per Head (Freight, Commission, etc.) ..... $_____

Income
- Average Sale Weight .....
- Income ..... $

Expenses
- Stocker Cost ..... $
- Labor ..... $
- Vet. & Processing ..... $
- Death Loss ..... $
- Hay ..... $
- Salt & Mineral ..... $
- Supplemental Feed ..... $
- Marketing ..... $
- Interest ..... $

Total Investment ..... $

Profit or Loss ..... $

Net Gain .....
Total Cost of Gain ..... $
Breakeven Per Cwt ..... $

```
  PW
 400.
C/C
  90.
PCT                Output
   2.
MDP
   5.
VET
   5.
%DL
   4.
LAB
   1.
SMN
   2.
HAY
  10.
C/T
  65.
ADG
 1.65
SUP
   5.
DAY
  60.
F/G
  14.
C/T
 150.
INT
  16.
SEL
  80.
%SH
   3.
MKT
   2.

648.86    ASW
519.09    I/H

360.00    C/H
 40.00     PC
  5.00     LC
```

```
   5.00   VEC
  14.40   DLC
   0.33    HC
   2.00   SMC
  22.50   SFC
   2.00    MC
  26.66   INT
 477.89   TIV

  41.20   P/L
 248.86    NG
  47.37   CDG
  73.65   BKE
```

Program

```
000  76 LBL
001  11  A
002  69 DP
003  00  00
004  25 CLR
005  03  3
006  03  3
007  04  4
008  03  3
009  69 DP
010  02  02
011  69 DP
012  05  05
013  91 R/S
014  42 STO
015  01  01
016  99 PRT
017  01  1
018  05  5
019  06  6
020  03  3
021  01  1
022  05  5
023  69 DP
024  02  02
025  69 DP
026  05  05
027  91 R/S
028  42 STO
029  02  02
030  99 PRT
031  03  3
032  03  3
033  01  1
034  05  5
035  03  3
036  07  7
037  69 DP
038  02  02
039  69 DP
040  05  05
041  91 R/S
042  42 STO
043  03  03
044  99 PRT
045  03  3
046  00  0
047  03  3
048  02  2
049  03  3
050  03  3
051  69 DP
052  02  02
053  69 DP
054  05  05
055  91 R/S
056  42 STO
057  04  04
058  99 PRT
059  04  4
060  02  2
061  01  1
062  07  7
063  03  3
064  07  7
065  69 DP
066  02  02
067  69 DP
068  05  05
069  91 R/S
070  42 STO
071  05  05
072  99 PRT
073  06  6
074  01  1
075  01  1
076  06  6
077  02  2
078  07  7
079  69 DP
080  02  02
081  69 DP
082  05  05
083  91 R/S
084  42 STO
085  06  06
086  99 PRT
087  02  2
088  07  7
089  01  1
090  03  3
091  01  1
092  04  4
093  69 DP
094  02  02
095  69 DP
096  05  05
097  91 R/S
098  42 STO
099  07  07
100  99 PRT
101  03  3
102  06  6
103  03  3
104  00  0
105  03  3
106  01  1
107  69 DP
108  02  02
109  69 DP
110  05  05
111  91 R/S
112  42 STO
113  08  08
114  99 PRT
115  02  2
116  03  3
117  01  1
118  03  3
119  04  4
120  05  5
121  69 DP
122  02  02
123  69 DP
124  05  05
125  91 R/S
126  42 STO
127  09  09
128  99 PRT
129  01  1
130  05  5
131  06  6
132  03  3
133  03  3
134  07  7
135  69 DP
136  02  02
137  69 DP
138  05  05
139  91 R/S
140  42 STO
141  10  10
142  99 PRT
143  01  1
144  03  3
145  01  1
146  06  6
147  02  2
148  02  2
149  69 DP
150  02  02
151  69 DP
152  05  05
153  91 R/S
154  42 STO
155  11  11
156  99 PRT
157  03  3
158  06  6
159  04  4
160  01  1
161  03  3
162  03  3
163  69 DP
164  02  02
165  69 DP
166  05  05
167  91 R/S
168  42 STO
169  12  12
170  99 PRT
171  01  1
172  06  6
173  01  1
174  03  3
175  04  4
176  05  5
177  69 DP
178  02  02
179  69 DP
180  05  05
181  91 R/S
182  42 STO
183  13  13
184  99 PRT
185  02  2
186  01  1
187  06  6
188  03  3
189  02  2
190  02  2
191  69 DP
192  02  02
193  69 DP
194  05  05
195  91 R/S
196  42 STO
197  14  14
198  99 PRT
199  01  1
200  05  5
201  06  6
202  03  3
203  03  3
204  07  7
205  69 DP
206  02  02
207  69 DP
208  05  05
209  91 R/S
210  42 STO
211  15  15
212  99 PRT
213  02  2
214  04  4
215  03  3
216  01  1
217  03  3
218  07  7
219  69 DP
220  02  02
221  69 DP
222  05  05
223  91 R/S
224  42 STO
225  16  16
226  99 PRT
227  03  3
228  06  6
229  01  1
230  07  7
231  02  2
232  07  7
233  69 DP
234  02  02
235  69 DP
236  05  05
237  91 R/S
238  42 STO
239  17  17
240  99 PRT
241  06  6
242  01  1
243  03  3
244  06  6
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647  43  RCL    697  06  6
648  29  29     698  01  1
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Computer Session

Dr. Joe Bitter: I think Dr. Evans' presentation has made it very, very clear that possibly our traditional ways of practicing veterinary medicine are not going to be adequate in the future. If we don't start thinking of veterinary practice from the standpoint of herd health management and expanding our fields of interest from the traditional medical and surgical areas that large animal practice has encompassed into the fields of nutrition and management, bovine practitioners are going to be relegated out of the agricultural picture. If we cannot put the kind of input into a planning program like Dr. Evans has described I question our usefulness to our clientele. I hope that this program serves as a stimulus for us, not only for ourselves but to go back and relay this information to other bovine practitioners in our area and to really stimulate some thought provoking continuing education programs along these lines in our own areas and states because I see it as a matter of real urgency. The bovine practitioner must begin to think more on the aspects of herd health management if we are going to continue to be economic assets to the agricultural community we serve.

The next person on our program, Dr. Max Garrison, received his B. S. degree in animal science in 1969 from Texas A & M and his D.V.M from Texas A & M in 1971. From '71 to '74 he was in a feedlot and cow calf practice and from '74 to '76 feedlot consultation to Jen-Sal Laboratories. In '76 he got his Master of Epidemiology at Texas A & M University, and in '77 to the present is a feedlot consultant in private practice. I believe Dr. Garrison developed his master's thesis on computer programming as directed toward feedlot medicine. Dr. Max Garrison.

Editor: Dr. Evans' paper will appear in the 1980 Bovine Practitioner.

Computers

Dr. Max Garrison
Canyon, Texas 79015

Dr. Garrison: Probably the reason I am here is because I am one veterinarian that is very interested in herd health practice, not necessarily just in feedlot but in cow calf production as well, and I am possibly one in the state that they could get a hold of that has had some experience with computers and so part of the reason I am on the program. I do not have anything in the way of lot of detailed programs or anything like that to offer you this afternoon for cow calf operations. What I would like to try to do in just a brief few minutes is possibly outline for you or at least give you some thought on to how you could possibly utilize a computer, be it by terminal as Gary talked about or possibly having one of your own or working with a rancher that has his own. I became involved in utilizing the computer four years ago. I knew that there was a lot of information in a feedyard that we were working with that was very accessible and that I could utilize to plot and graph and utilize it as a real tool in doing a very good job of working with the feed yard