

98年使用年限計畫期中報告前置統計作業

目的：新增 3 種乳牛使用年限性狀資料集，其中 84月齡與離群月齡資料集將進一步進行變方共變方成分分析，以探求該兩性狀之遺傳率與遺傳相關。

一共有3段程式

1. e193-97.prg 針對 DHI 93 至97 年超過84月齡以上牛隻之編輯程式
2. e193-97.prg 針對 DHI 93 至97 年離群牛隻使用年限之編輯程式
3. e193-97.prg 針對 DHI 93 至97 年同期牛群性能編輯程式

*

1. e193-97.prg 針對 DHI 93 至97 年超過84月齡以上牛隻之編輯程式

```
*program:980511 dhi\e193-97.prg
```

*

```
* file           process                records
* dhi\e193-97    increase mk93-97 data                82616
*                left thw last lactaion data            8305
*                dele for mkday>365                    6081
*                dele for mem<=2000                    5308
*                dele for ci<=300 .or. ci>=600          3857
*                dele for fbi<=21 .or. fbi>=180         1869
*                dele for open<=60 .or. open>=365      1613
```

*

```
close all
```

```
set talk off
```

set safe off

use dhi\e193-97a && sele age>=84mns

zap

use dhi\e193-97a

appe from dhi84\mk9301 for age>=84 .and. sire#" " .and. dam#" "

*wait

appe from dhi84\mk9302 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9303 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9304 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9305 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9306 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9307 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9308 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9309 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9310 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9311 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9312 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9401 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9402 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9403 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9404 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9405 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9406 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9407 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9408 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9409 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9410 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9411 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9412 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9501 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9502 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9503 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9504 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9505 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9506 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9507 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9508 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9509 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9510 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9511 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9512 for age>=84 .and. sire#" " .and. dam#" "

appe from dhi84\mk9601 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9602 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9603 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9604 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9605 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9606 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9607 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9608 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9609 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9610 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9611 for age>=84 .and. sire#" " .and. dam#" "
appe from dhi84\mk9612 for age>=84 .and. sire#" " .and. dam#" "

```
appe from dhi84\mk9701 for age>=84 .and. sire#" " .and. dam#" "  
appe from dhi84\mk9702 for age>=84 .and. sire#" " .and. dam#" "  
appe from dhi84\mk9703 for age>=84 .and. sire#" " .and. dam#" "  
appe from dhi84\mk9704 for age>=84 .and. sire#" " .and. dam#" "  
appe from dhi84\mk9705 for age>=84 .and. sire#" " .and. dam#" "  
appe from dhi84\mk9706 for age>=84 .and. sire#" " .and. dam#" "  
appe from dhi84\mk9707 for age>=84 .and. sire#" " .and. dam#" "  
appe from dhi84\mk9708 for age>=84 .and. sire#" " .and. dam#" "  
appe from dhi84\mk9709 for age>=84 .and. sire#" " .and. dam#" "  
appe from dhi84\mk9710 for age>=84 .and. sire#" " .and. dam#" "  
appe from dhi84\mk9711 for age>=84 .and. sire#" " .and. dam#" "  
appe from dhi84\mk9712 for age>=84 .and. sire#" " .and. dam#" "
```

```
sort to dhi\e193-97b on farm_c,hd_no,lac
```

```
use dhi\e193-97b
```

```
go top
```

```
*brow
```

```
close all
```

```
set talk off
```

```
use dhi\e193-97b
```

```
go top
```

```
do while .not. eof()
```

```
xfarm_c=farm_c
```

```
xhd_no=hd_no
```

```
xlac=lac
```

```
skip
```

```
if farm_c=xfarm_c .and. hd_no=xhd_no
```

```
skip -1
```

```

dele
skip
endif
*? recno()
enddo
pack
? reccount()
*wait

*—— calculate age
go top
do while .not. eof()
xmtest_d=ctod((substr(mtest_d,3,2)+"/"+substr(mtest_d,5,2)+"/"+str(val(substr(mtest_d,1,2))+1911
,4)))
xbirth_d=ctod((substr(birth_d,3,2)+"/"+substr(birth_d,5,2)+"/"+str(val(substr(birth_d,1,2))+1911
,4)))
xage=(xmtest_d-xbirth_d)/30
repl age with xage
skip
enddo

*—— correct v1ac ——
go top
do while .not. eof()
if          age<90 .and. v1ac<5          && age-27—>v1ac=1
repl v1ac with 5                        && age-41—>v1ac=2
endif                                         && age-55—>v1ac=3
if age>90 .and. age<104 .and. v1ac<6      && age-69—>v1ac=4

```

```
repl v1ac with 6                                && age-83—>v1ac=5
endif                                           && age-97—>v1ac=6
if age>104 .and. age<118 .and. v1ac<7        && age-111—>v1ac=7
repl v1ac with 7                                && age-125—>v1ac=8
endif                                           && age-139—>v1ac=9
if age>118 .and. age<132 .and. v1ac<8        && age-153—>v1ac=10
repl v1ac with 8                                && age-167—>v1ac=11
endif                                           && age-181—>v1ac=12
if age>132 .and. age<146 .and. v1ac<9        && age-195—>v1ac=13
repl v1ac with 9                                && age-209—>v1ac=14
endif
if age>146 .and. age<160 .and. v1ac<10
repl v1ac with 10
endif
if age>160 .and. age<174 .and. v1ac<11
repl v1ac with 11
endif
if age>174 .and. age<188 .and. v1ac<12
repl v1ac with 12
endif
if age>188 .and. age<202 .and. v1ac<13
repl v1ac with 13
endif
if age>202 .and. v1ac<14
repl v1ac with 14
endif
skip
enddo
```

```

*—— calculate fbi,open,ci
go top
do while .not. eof()
if cd=" " .or. tbf_d=" "
repl fbi with 0
else
md=ctod(substr(cd,3,2)+"/"+substr(cd,5,2)+;
"/"+str(val(substr(cd,1,2))+1911,4))
mh=ctod(substr(tbf_d,3,2)+"/"+substr(tbf_d,5,2)+;
"/"+str(val(substr(tbf_d,1,2))+1911,4))
mi=mh-md
if mi<999
repl fbi with mi
else
repl fbi with 999
endif
endif

if cd=" " .or. tbf_d=" "
repl open with 0
else
md=ctod(substr(cd,3,2)+"/"+substr(cd,5,2)+;
"/"+str(val(substr(cd,1,2))+1911,4))
mz=ctod(substr(tbf_d,3,2)+"/"+substr(tbf_d,5,2)+;
"/"+str(val(substr(tbf_d,1,2))+1911,4))
m1=mz-md
if m1<999
repl open with m1
else
repl open with 999

```

```

endif
endif

if cd=" " .or. lcd=" "
repl ci with 0
else
mf=ctod(substr(lcd,3,2)+"/"+substr(lcd,5,2)+;
"/"+str(val(substr(lcd,1,2))+1911,4))
md=ctod(substr(cd,3,2)+"/"+substr(cd,5,2)+;
"/"+str(val(substr(cd,1,2))+1911,4))
mg=md-mf
if mg<999
repl ci with mg
else
repl ci with 999
endif
endif

skip
enddo

*—— calculate age
go top
do while .not. eof()
xmtest_d=ctod((substr(mtest_d,3,2)+"/"+substr(mtest_d,5,2);
+"/"+str(val(substr(mtest_d,1,2))+1911,4)))
xbirth_d=ctod((substr(birth_d,3,2)+"/"+substr(birth_d,5,2);
+"/"+str(val(substr(birth_d,1,2))+1911,4)))
xage=(xmtest_d-xbirth_d)/30

```



```
repl age with xage
```

```
skip
```

```
enddo
```

```
*—— calculate tbc
```

```
repl all tbf_d with tbf_d for tbf_d=" "
```

```
go top
```

```
do while .not. eof()
```

```
xtbf=ctod((substr(tbf_d,3,2)+"/"+substr(tbf_d,5,2)+"/";
```

```
+str(val(substr(tbf_d,1,2))+1911,4)))
```

```
xtbl=ctod((substr(tbf_d,3,2)+"/"+substr(tbf_d,5,2)+"/";
```

```
+str(val(substr(tbf_d,1,2))+1911,4)))
```

```
xtbc=((xtbl-xtbf)/21)+1
```

```
repl tbc with xtbc
```

```
skip
```

```
enddo
```

```
repl all scs with (log(tsc/100)/log(2))+3
```

```
repl all scs with 0 for scs<=0
```

```
repl all ts with tfp+tp+lp+.7
```

```
repl all snf with tpp+lp+.7
```

```
repl all proten with (tpp*mem)/100
```

```
repl all fat with (tfp*mem)/100
```

```
repl all lactose with (lp*mem)/100
```

```
*set talk on
```

```
*count for mday>365
```

```
*count for mem<=2000
```

```
*count for ci<=300 .or. ci>=600
```

*count for fbi<=21 .or. fbi>=180

*count for open<=60 .or. open>=300

*set talk off

*wait

? "delete for mday>365"

delete for mday>365

pack

? recount()

? "delete for mem<=2000"

delete for mem<=2000

pack

? recount()

? "delete for ci<=300 .or. ci>=600"

delete for ci<=300 .or. ci>=600

pack

? recount()

? "delete for fbi<=21 .or. fbi>=180 "

delete for fbi<=21 .or. fbi>=180

pack

? recount()

? "delete for open<=60 .or. open>=365"

delete for open<=60 .or. open>=365

pack

? recount()

wait

*delete mday>=813.44 .or. mday<1

*delete v1ac>=18 .or. v1ac<1

*dele mem>=14211.74 .or. mem<542.14
*dele mef>=799.7 .or. mef<30.5
*dele fat>=513.05 .or. fat<45.83
*dele proten>=429.18 .or. proten<62.7
*dele lactose>=602.92 .or. lactose<91.78
*dele tm>=80 .or. tm<1
*dele tfp>=6.6 .or. tfp<1
*dele tpp>=4.62 .or. tpp<1.9
*dele lp>=5.97 .or. lp<3.57
*dele snf>=10.62 .or. snf<6.94
*dele ts>=16.52 .or. ts<8.68
*dele tsc<=4222.22 .or. tsc<2
*dele scs>=11 .or. scs<1
*dele age>=145.3 .or. age<17.46
*dele fcd>=34 .or. fcd<17.46
*dele fbi>=180 .or. fbi<21
*dele open>=300 .or. open<60
*dele ci>=600 .or. ci<300
*dele tbc>=14 .or. tbc<1

pack

copy to dhi\e193-97

use dhi\e193-97

go top

brow

close all

*

2. e193-97.prg 針對 DHI 93 至97 年離群牛隻使用年限之編輯程式

```

*program:980618 dhi\h193-97.prg
*sele 1 dhi\h193-97a: from dhi93.dbf all no repeat DHI cows in 93
*sele 2 dhi\h193-97b: result file, the real final age records in it
*sele 3 dhi84\mk9???: use different mk9??? by do loop
*sele 4 dhi\h193-97c: record if test or not with 0 and 1

```

* file	process	records
* dhi\h193-97	lower data for h193-97(dhi93)	45062
*	dele for sire=" "	34351
*	seek the herd life age	19721
*	dele for mkday>365	14700
*	dele for mem<=2000	12574
*	dele for ci<=300 .or. ci>=600	9299
*	dele for fbi<=21 .or. fbi>=180	4830
*	dele for open<=60 .or. open>=300	4053

```

close all
set talk on
set safe off

```

```

use dhi84\dhi93
copy to dhi\h193-97a
copy stru to dhi\h193-97b

```

```

close all
set talk off
use dhi\h193-97a

```

```
dele for sire=" "  
pack  
*brow  
  
*———— dele for same cows but have different lactose data —————  
go top  
do whil .not. eof()  
xfarm_c=farm_c  
xhd_no=hd_no  
skip  
if farm_c=xfarm_c .and. hd_no=xhd_no  
skip -1  
dele  
skip  
endif  
enddo  
  
? reccount()  
  
pack  
*brow  
wait  
  
*dele for recno(>11          &&   test finished will be delete  
*pack  
*brow  
*wait  
  
* attention: about 2 days for running next section
```

```

*———— look for date when the dairy leave cows —————
*———— and then record the final data write in the h193-97b —————

close all

sele 1

use dhi\h193-97a  && base on dhi84\dhi93.dbf

go top

sele 2

use dhi\h193-97b

zap

n=0          && counter of sele4 h193-97c

sele 1

do while .not. eof()

xfarm_c=farm_c

xhd_no=hd_no

xlac=lac

by=val(substr(yymm,1,2))

bm=val(substr(yymm,3,2))

*? xfarm_c,xhd_no,xlac,str(by,2),str(bm,2)

*wait

if bm=12

by=by+1

bm=1

else

bm=bm+1

endif

*? str(by,2),str(bm,2)

*wait

```

fy=97

fm=12

sele 4

use dhi\h193-97c

zap

n=n+1

do while by#fy .or. bm#fm

m_dbf="mk"+trim(str(by,2))+1trim(substr(str(bm+100,3),2,2))

sele 3

use dhi84\&m_dbf

locate for farm_c=xfarm_c .and. hd_no=xhd_no

if found()

sele 4

appe blan

repl yymm with TRIM(STR(BY,2))+LTRIM(SUBSTR(STR(BM+100,3),2,2))

repl yn with 1

else

sele 4

appe blan

repl yymm with TRIM(STR(BY,2))+LTRIM(SUBSTR(STR(BM+100,3),2,2))

repl yn with 0

endif

*brow

*wait

```
*? by,bm
```

```
*wait
```

```
bm=bm+1
```

```
if bm=13
```

```
by=by+1
```

```
bm=1
```

```
endif bm=13
```

```
enddo
```

```
sele 4
```

```
go bott
```

```
*brow
```

```
do while .not. bof()
```

```
if yn=1
```

```
by=val(substr(yymm,1,2))
```

```
bm=val(substr(yymm,3,2))
```

```
exit
```

```
endif
```

```
skip -1
```

```
enddo
```

```
*? by,bm
```

```
*wait
```

```
m_dbf="mk"+TRIM(STR(BY,2))+LTRIM(SUBSTR(STR(BM+100,3),2,2))
```



```
sele 3
use dhi84\&m_dbf
locate for farm_c=xfarm_c .and. hd_no=xhd_no
if found()
```

```
xYMM      =  YMM
xFARM_C   =  FARM_C
xHD_NO    =  HD_NO
xLAC      =  LAC
xMKDAY    =  MKDAY
xTM       =  TM
xTFP      =  TFP
xTPP      =  TPP
xLP       =  LP
xTSCC     =  TSCC
xUN       =  UN
xCR       =  CR
xMEM      =  MEM
xMEF      =  MEF
xHMDM     =  HMDM
xHMDF     =  HMDF
xSIRE     =  SIRE
xDAM      =  DAM
xLCD      =  LCD
xCD       =  CD
xFCD      =  FCD
xCI       =  CI
xTBF_D    =  TBF_D
xFBI      =  FBI
xTBF_S    =  TBF_S
```

xTBC = TBC
xTBL_D = TBL_D
xOPEN = OPEN
xTBL_S = TBL_S
xBIRTH_D = BIRTH_D
xSUPERV_C = SUPERV_C
xSUPVNAME = SUPVNAME
xFARM_N = FARM_N
xMCD = MCD
xMBIRTH_D = MBIRTH_D
xMTEST_D = MTEST_D
xAGE = AGE
xID = ID
xPROTEN = PROTEN
xFAT = FAT
xLACTOSE = LACTOSE
xTS = TS
xSNF = SNF
*xSCS = SCS
xVLAC = VLAC

sele 2

appe blan

rep1 YMM with xYMM
rep1 FARM_C with xFARM_C
rep1 HD_NO with xHD_NO
rep1 LAC with xLAC
rep1 MKDAY with xMKDAY
rep1 TM with xTM
rep1 TFP with xTFP

rep1 TPP	with	xTPP
rep1 LP	with	xLP
rep1 TSCC	with	xTSCC
rep1 UN	with	xUN
rep1 CR	with	xCR
rep1 MEM	with	xMEM
rep1 MEF	with	xMEF
rep1 HMDM	with	xHMDM
rep1 HMDF	with	xHMDF
rep1 SIRE	with	xSIRE
rep1 DAM	with	xDAM
rep1 LCD	with	xLCD
rep1 CD	with	xCD
rep1 FCD	with	xFCD
rep1 CI	with	xCI
rep1 TBF_D	with	xTBF_D
rep1 FBI	with	xFBI
rep1 TBF_S	with	xTBF_S
rep1 TBC	with	xTBC
rep1 TBL_D	with	xTBL_D
rep1 OPEN	with	xOPEN
rep1 TBL_S	with	xTBL_S
rep1 BIRTH_D	with	xBIRTH_D
rep1 SUPERV_C	with	xSUPERV_C
rep1 SUPVNAME	with	xSUPVNAME
rep1 FARM_N	with	xFARM_N
rep1 MCD	with	xMCD
rep1 MBIRTH_D	with	xMBIRTH_D
rep1 MTEST_D	with	xMTEST_D
rep1 AGE	with	xAGE

```
repl ID          with xID
repl PROTEN     with xPROTEN
repl FAT        with xFAT
repl LACTOSE    with xLACTOSE
repl TS         with xTS
repl SNF        with xSNF
*repl SCS       with xSCS
repl VLAC       with xVLAC
```

```
endif
```

```
set color to bg+/n,,,
```

```
a1=str(recno()/n*100,4,1)+"%"
```

```
*if recno()>14485 .or. recno()<14490
```

```
*? "counter:",str(n,5),"          ", "No found"
```

```
*else
```

```
*? "counter:",str(n,5),"          ", "found HL cow & No:",str(recno(),5),"  ",a1
```

```
*endif
```

```
if recno()#14486
```

```
? str(n,5),a1
```

```
else
```

```
? str(n,5),"No found"
```

```
endif
```

```
sele 2
```

```
*brow
```

```
sele 1
```

```

skip
enddo while .not. bof()

*wait
sele 2
go top
*brow
close all
use dhi\h193-97b

*—— calculate age
go top
do while .not. eof()
xmtest_d=ctod((substr(mtest_d,3,2)+"/"+substr(mtest_d,5,2)+"/"+str(val(substr(mtest_d,1,2))+1911
,4)))
xbirth_d=ctod((substr(birth_d,3,2)+"/"+substr(birth_d,5,2)+"/"+str(val(substr(birth_d,1,2))+1911
,4)))
xage=(xmtest_d-xbirth_d)/30
repl age with xage
skip
enddo

*—— correct v1ac ——
go top
do while .not. eof()

if          age<=34 .and. v1ac<1
repl v1ac with 1

```

```

endif
if age>34 .and. age<=48 .and. v1ac<2
repl v1ac with 2
endif
if age>48 .and. age<=62 .and. v1ac<3
repl v1ac with 3
endif
if age>62 .and. age<=76 .and. v1ac<4
repl v1ac with 4
endif
if age>76 .and. age<=90 .and. v1ac<5      && age-27—>v1ac=1
repl v1ac with 5                          && age-41—>v1ac=2
endif                                       && age-55—>v1ac=3
if age>90 .and. age<=104 .and. v1ac<6     && age-69—>v1ac=4
repl v1ac with 6                          && age-83—>v1ac=5
endif                                       && age-97—>v1ac=6
if age>104 .and. age<=118 .and. v1ac<7    && age-111—>v1ac=7
repl v1ac with 7                          && age-125—>v1ac=8
endif                                       && age-139—>v1ac=9
if age>118 .and. age<=132 .and. v1ac<8    && age-153—>v1ac=10
repl v1ac with 8                          && age-167—>v1ac=11
endif                                       && age-181—>v1ac=12
if age>132 .and. age<=146 .and. v1ac<9    && age-195—>v1ac=13
repl v1ac with 9                          && age-209—>v1ac=14
endif
if age>146 .and. age<=160 .and. v1ac<10
repl v1ac with 10
endif
if age>160 .and. age<=174 .and. v1ac<11
repl v1ac with 11

```

```

endif
if age>174 .and. age<=188 .and. v1ac<12
repl v1ac with 12
endif
if age>188 .and. age<=202 .and. v1ac<13
repl v1ac with 13
endif
if age>202 .and. v1ac<14
repl v1ac with 14
endif
skip
enddo

*—— calculate fbi,open,ci
go top
do while .not. eof()
if cd=" " .or. tbf_d=" "
repl fbi with 0
else
md=ctod(substr(cd,3,2)+"/"+substr(cd,5,2)+
"/"+str(val(substr(cd,1,2))+1911,4))
mh=ctod(substr(tbf_d,3,2)+"/"+substr(tbf_d,5,2)+
"/"+str(val(substr(tbf_d,1,2))+1911,4))
mi=mh-md
if mi<999
repl fbi with mi
else
repl fbi with 999
endif

```

```
endif

if cd=" " .or. tbl_d=" "
repl open with 0
else
md=ctod(substr(cd,3,2)+"/"+substr(cd,5,2)+;
    "/" +str(val(substr(cd,1,2))+1911,4))
mz=ctod(substr(tbl_d,3,2)+"/"+substr(tbl_d,5,2)+;
    "/" +str(val(substr(tbl_d,1,2))+1911,4))
m1=mz-md
if m1<999
repl open with m1
else
repl open with 999
endif
endif
```

```
if cd=" " .or. lcd=" "
repl ci with 0
else
mf=ctod(substr(lcd,3,2)+"/"+substr(lcd,5,2)+;
    "/" +str(val(substr(lcd,1,2))+1911,4))
md=ctod(substr(cd,3,2)+"/"+substr(cd,5,2)+;
    "/" +str(val(substr(cd,1,2))+1911,4))
mg=md-mf
if mg<999
repl ci with mg
else
repl ci with 999
endif
```



```
endif
```

```
skip
```

```
enddo
```

```
*—— calculate age
```

```
go top
```

```
do while .not. eof()
```

```
xmtest_d=ctod((substr(mtest_d,3,2)+"/"+substr(mtest_d,5,2);
```

```
+"/"+str(val(substr(mtest_d,1,2))+1911,4)))
```

```
xbirth_d=ctod((substr(birth_d,3,2)+"/"+substr(birth_d,5,2);
```

```
+"/"+str(val(substr(birth_d,1,2))+1911,4)))
```

```
xage=(xmtest_d-xbirth_d)/30
```

```
repl age with xage
```

```
skip
```

```
enddo
```

```
*—— calculate tbc
```

```
go top
```

```
do while .not. eof()
```

```
xtbf=ctod((substr(tbf_d,3,2)+"/"+substr(tbf_d,5,2)+"/";
```

```
+str(val(substr(tbf_d,1,2))+1911,4)))
```

```
xtb1=ctod((substr(tb1_d,3,2)+"/"+substr(tb1_d,5,2)+"/";
```

```
+str(val(substr(tb1_d,1,2))+1911,4)))
```

```
xtbc=((xtb1-xtbf)/21)+1
```

```
repl tbc with xtbc
```

```
skip
```

```
enddo
```

```
repl all scs      with (log(tsc/100)/log(2))+3
repl all scs      with 0 for scs<=0
repl all ts       with tfp+tp+lp+.7
repl all snf      with tpp+lp+.7
repl all proten   with (tpp*mem)/100
repl all fat      with (tfp*mem)/100
repl all lactose  with (lp*mem)/100
```

```
? "dele for mday>365"
```

```
dele for mday>365
```

```
pack
```

```
? reccount()
```

```
? "dele for mem<=2000"
```

```
dele for mem<=2000
```

```
pack
```

```
? reccount()
```

```
? "dele for ci<=300 .or. ci>=600"
```

```
dele for ci<=300 .or. ci>=600
```

```
pack
```

```
? reccount()
```

```
? "dele for fbi<=21 .or. fbi>=180 "
```

```
dele for fbi<=21 .or. fbi>=180
```

```
pack
```

```
? reccount()
```

```
? "dele for open<=60 .or. open>=300"
```

```
dele for open<=60 .or. open>=300
```

```
pack
```

```
? reccount()
```

```
wait
```

pack

use dhi\h193-97

go top

*brow fiel Yymm,FARM_C,HD_NO,LAC,TM,TFP,TPP,TSCC,MEM,SIRE,DAM,CI,BIRTH_D,AGE,ID,PROTEN,FAT

brow fiel Yymm,FARM_C,HD_NO,LAC,TM,MEM,SIRE,DAM,CI,BIRTH_D,AGE,ID,PROTEN,FAT

wait

exit

*

3. e193-97.prg 針對 DHI 93 至97 年同期牛群性能編輯程式

*program:980628 dhi\dh93-97.prg

*

* file	process	records
--------	---------	---------

* dhi\e193-97	increase mk93-97 data	
---------------	-----------------------	--

*	left thw last lactaion data	
---	-----------------------------	--

*	dele for mkday>365	
---	--------------------	--

*	dele for mem<=2000	
---	--------------------	--

*	dele for ci<=300 .or. ci>=600	
---	-------------------------------	--

*	dele for fbi<=21 .or. fbi>=180	
---	--------------------------------	--

*	dele for open<=60 .or. open>=300	
---	----------------------------------	--

*

close all

set talk off

set safe off

```
use dhi\dh93-97a  && sele dhi93-dhi97 records
zap
```

```
use dhi\dh93-97a
```

```
appe from dhi84\mk9301 for sire#" " .and. dam#" "
appe from dhi84\mk9302 for sire#" " .and. dam#" "
appe from dhi84\mk9303 for sire#" " .and. dam#" "
appe from dhi84\mk9304 for sire#" " .and. dam#" "
appe from dhi84\mk9305 for sire#" " .and. dam#" "
appe from dhi84\mk9306 for sire#" " .and. dam#" "
appe from dhi84\mk9307 for sire#" " .and. dam#" "
appe from dhi84\mk9308 for sire#" " .and. dam#" "
appe from dhi84\mk9309 for sire#" " .and. dam#" "
appe from dhi84\mk9310 for sire#" " .and. dam#" "
appe from dhi84\mk9311 for sire#" " .and. dam#" "
appe from dhi84\mk9312 for sire#" " .and. dam#" "

appe from dhi84\mk9401 for sire#" " .and. dam#" "
appe from dhi84\mk9402 for sire#" " .and. dam#" "
appe from dhi84\mk9403 for sire#" " .and. dam#" "
appe from dhi84\mk9404 for sire#" " .and. dam#" "
appe from dhi84\mk9405 for sire#" " .and. dam#" "
appe from dhi84\mk9406 for sire#" " .and. dam#" "
appe from dhi84\mk9407 for sire#" " .and. dam#" "
appe from dhi84\mk9408 for sire#" " .and. dam#" "
appe from dhi84\mk9409 for sire#" " .and. dam#" "
appe from dhi84\mk9410 for sire#" " .and. dam#" "
appe from dhi84\mk9411 for sire#" " .and. dam#" "
appe from dhi84\mk9412 for sire#" " .and. dam#" "
```

appe from dhi84\mk9501 for sire#" " .and. dam#" "
appe from dhi84\mk9502 for sire#" " .and. dam#" "
appe from dhi84\mk9503 for sire#" " .and. dam#" "
appe from dhi84\mk9504 for sire#" " .and. dam#" "
appe from dhi84\mk9505 for sire#" " .and. dam#" "
appe from dhi84\mk9506 for sire#" " .and. dam#" "
appe from dhi84\mk9507 for sire#" " .and. dam#" "
appe from dhi84\mk9508 for sire#" " .and. dam#" "
appe from dhi84\mk9509 for sire#" " .and. dam#" "
appe from dhi84\mk9510 for sire#" " .and. dam#" "
appe from dhi84\mk9511 for sire#" " .and. dam#" "
appe from dhi84\mk9512 for sire#" " .and. dam#" "

appe from dhi84\mk9601 for sire#" " .and. dam#" "
appe from dhi84\mk9602 for sire#" " .and. dam#" "
appe from dhi84\mk9603 for sire#" " .and. dam#" "
appe from dhi84\mk9604 for sire#" " .and. dam#" "
appe from dhi84\mk9605 for sire#" " .and. dam#" "
appe from dhi84\mk9606 for sire#" " .and. dam#" "
appe from dhi84\mk9607 for sire#" " .and. dam#" "
appe from dhi84\mk9608 for sire#" " .and. dam#" "
appe from dhi84\mk9609 for sire#" " .and. dam#" "
appe from dhi84\mk9610 for sire#" " .and. dam#" "
appe from dhi84\mk9611 for sire#" " .and. dam#" "
appe from dhi84\mk9612 for sire#" " .and. dam#" "

appe from dhi84\mk9701 for sire#" " .and. dam#" "
appe from dhi84\mk9702 for sire#" " .and. dam#" "
appe from dhi84\mk9703 for sire#" " .and. dam#" "

```
appe from dhi84\mk9704 for sire#" " .and. dam#" "  
appe from dhi84\mk9705 for sire#" " .and. dam#" "  
appe from dhi84\mk9706 for sire#" " .and. dam#" "  
appe from dhi84\mk9707 for sire#" " .and. dam#" "  
appe from dhi84\mk9708 for sire#" " .and. dam#" "  
appe from dhi84\mk9709 for sire#" " .and. dam#" "  
appe from dhi84\mk9710 for sire#" " .and. dam#" "  
appe from dhi84\mk9711 for sire#" " .and. dam#" "  
appe from dhi84\mk9712 for sire#" " .and. dam#" "
```

```
wait
```

```
*delete for mksday>365
```

```
*delete for mem=0
```

```
*delete for tbf_d=" "
```

```
*delete for tbl_d=" "
```

```
*delete for lcd=" "
```

```
pack
```

```
*wait
```

```
*repl all mtest_d with yymm+substr(mtest_d,5,2) for yymm#substr(mtest_d,1,4)
```

```
*—— calculate age
```

```
go top
```

```
do while .not. eof()
```

```
xmtest_d=ctod((substr(mtest_d,3,2)+"/"+substr(mtest_d,5,2)+"/"+str(val(substr(mtest_d,1,2))+1911  
,4)))
```

```
xbirth_d=ctod((substr(birth_d,3,2)+"/"+substr(birth_d,5,2)+"/"+str(val(substr(birth_d,1,2))+1911
```

```
,4)))
```

```
xage=(xmtest_d-xbirth_d)/30
```

```
repl age with xage
```

```
skip
```

```
enddo
```

```
*—— correct v1ac ——
```

```
go top
```

```
do while .not. eof()
```

```
if age<=34 .and. v1ac<1
```

```
repl v1ac with 1
```

```
endif
```

```
if age>34 .and. age<=48 .and. v1ac<2
```

```
repl v1ac with 2
```

```
endif
```

```
if age>48 .and. age<=62 .and. v1ac<3
```

```
repl v1ac with 3
```

```
endif
```

```
if age>62 .and. age<=76 .and. v1ac<4
```

```
repl v1ac with 4
```

```
endif
```

```
if age>76 .and. age<=90 .and. v1ac<5 && age-27—>v1ac=1
```

```
repl v1ac with 5 && age-41—>v1ac=2
```

```
endif && age-55—>v1ac=3
```

```
if age>90 .and. age<=104 .and. v1ac<6 && age-69—>v1ac=4
```

```
repl v1ac with 6 && age-83—>v1ac=5
```

```
endif && age-97—>v1ac=6
```

```
if age>104 .and. age<=118 .and. v1ac<7 && age-111—>v1ac=7
```

```
repl v1ac with 7 && age-125—>v1ac=8
```

```

endif                                && age-139-->vlac=9
if age>118 .and. age<=132 .and. vlac<8  && age-153-->vlac=10
repl vlac with 8                      && age-167-->vlac=11
endif                                  && age-181-->vlac=12
if age>132 .and. age<=146 .and. vlac<9  && age-195-->vlac=13
repl vlac with 9                      && age-209-->vlac=14
endif
if age>146 .and. age<=160 .and. vlac<10
repl vlac with 10
endif
if age>160 .and. age<=174 .and. vlac<11
repl vlac with 11
endif
if age>174 .and. age<=188 .and. vlac<12
repl vlac with 12
endif
if age>188 .and. age<=202 .and. vlac<13
repl vlac with 13
endif
if age>202 .and. vlac<14
repl vlac with 14
endif
skip
enddo

```

```
*----- calculate fbi,open,ci
```

```
go top
```

```
do while .not. eof()
```

```
if cd=" " .or. tbf_d=" "
```



```
repl fbi with 0
else
md=ctod(substr(cd,3,2)+"/"+substr(cd,5,2)+;
    "/" +str(val(substr(cd,1,2))+1911,4))
mh=ctod(substr(tbf_d,3,2)+"/"+substr(tbf_d,5,2)+;
    "/" +str(val(substr(tbf_d,1,2))+1911,4))
mi=mh-md
if mi<999
repl fbi with mi
else
repl fbi with 999
endif
endif
```

```
if cd=" " .or. tbf_d=" "
repl open with 0
else
md=ctod(substr(cd,3,2)+"/"+substr(cd,5,2)+;
    "/" +str(val(substr(cd,1,2))+1911,4))
mz=ctod(substr(tbf_d,3,2)+"/"+substr(tbf_d,5,2)+;
    "/" +str(val(substr(tbf_d,1,2))+1911,4))
m1=mz-md
if m1<999
repl open with m1
else
repl open with 999
endif
endif
```

```
if cd=" " .or. lcd=" "
```

```

repl ci with 0
else
mf=ctod(substr(1cd,3,2)+"/"+substr(1cd,5,2)+;
"/"+str(val(substr(1cd,1,2))+1911,4))
md=ctod(substr(cd,3,2)+"/"+substr(cd,5,2)+;
"/"+str(val(substr(cd,1,2))+1911,4))
mg=md-mf
if mg<999
repl ci with mg
else
repl ci with 999
endif
endif

skip
enddo

*——— calculate age
go top
do whil .not. eof()
xmtest_d=ctod((substr(mtest_d,3,2)+"/"+substr(mtest_d,5,2);
+"/"+str(val(substr(mtest_d,1,2))+1911,4)))
xbirth_d=ctod((substr(birth_d,3,2)+"/"+substr(birth_d,5,2);
+"/"+str(val(substr(birth_d,1,2))+1911,4)))
xage=(xmtest_d-xbirth_d)/30
repl age with xage
skip
enddo

```

```

*—— calculate tbc
repl all tbl_d with tbf_d for tbf_d=" "
go top
do while .not. eof()
xtbf=ctod((substr(tbf_d,3,2)+"/"+substr(tbf_d,5,2)+"/";
+str(val(substr(tbf_d,1,2))+1911,4)))
xtbl=ctod((substr(tbl_d,3,2)+"/"+substr(tbl_d,5,2)+"/";
+str(val(substr(tbl_d,1,2))+1911,4)))
xtbc=((xtbl-xtbf)/21)+1
repl tbc with xtbc
skip
enddo

```

```

repl all tscs with 2 for tscs<=1
repl all scs with (log(tscs/100)/log(2))+3
repl all scs with 0 for scs<=0
repl all ts with tfp+tpp+lp+.7
repl all snf with tpp+lp+.7
repl all proten with (tpp*mem)/100
repl all fat with (tfp*mem)/100
repl all lactose with (lp*mem)/100

```

```

*wait
set talk on

```

```

*delete for mkday>=813.44 .or. mkday<1
*delete for v1ac>=18 .or. v1ac<1
*delete for mem>=14211.74 .or. mem<542.14
*delete for mef>=799.7 .or. mef<30.5

```

```
*dele for fat>=513.05 .or. fat<45.83
*dele for proten>=429.18 .or. proten<62.7
*dele for lactose>=602.92 .or. lactose<91.78
*dele for tm>=80 .or. tm<1
*dele for tfp>=6.6 .or. tfp<1
*dele for tpp>=4.62 .or. tpp<1.9
*dele for lp>=5.97 .or. lp<3.57
*dele for snf>=10.62 .or. snf<6.94
*dele for ts>=16.52 .or. ts<8.68
*dele for tsc<=4222.22 .or. tsc<2
*dele for scs>=11 .or. scs<1
*dele for age>=145.3 .or. age<17.46
*dele for fcd>=34 .or. (fcd<17.46 .and. fcd>0)
*dele for fbi>=180 .or. fbi<21
*dele for open>=300 .or. open<60
*dele for ci>=600 .or. ci<300
*dele for tbc>=14 .or. tbc<1
```

```
*set talk on
```

```
*count for mkday>365
```

```
*count for mem<=2000
```

```
*count for ci<=300 .or. ci>=600
```

```
*count for fbi<=21 .or. fbi>=180
```

```
*count for open<=60 .or. open>=300
```

```
*set talk off
```

```
*wait
```

```
*? "dele for mkday>365"
```

```
*dele for mkday>365
```

```
*pack
*? reccount()
*? "dele for mem<=2000"
*dele for mem<=2000
*pack
*? reccount()
*? "dele for ci<=300 .or. ci>=600"
*dele for ci<=300 .or. ci>=600
*pack
*? reccount()
*? "dele for fbi<=21 .or. fbi>=180 "
*dele for fbi<=21 .or. fbi>=180
*pack
*? reccount()
*? "dele for open<=60 .or. open>=300"
*dele for open<=60 .or. open>=300
*pack
*? reccount()
**wait
pack
```

copy to dhi\dh93-97b

use dhi\dh93-97b

go top

*brow

pack

copy to dhi\dh93-97

```
use dhi\dh93-97
```

```
go top
```

```
brow
```

```
close all
```

*

產生之檔案

1. e193-97.dbf DHI 93 至97 年超過84月齡以上牛隻之性能檔案
2. e193-97.dbf DHI 93 至97 年離群牛隻使用年限之性能檔案
3. e193-97.dbf DHI 93 至97 年同期牛群性能檔案

*

980615-利用DHI年度SAS統計諸項程式統計使用年限84月齡牛隻擷取資料

84月齡牛隻擷取檔之生產與繁殖性狀統計

```
filename temp 'c:\dbase\dhi\e193-97.dbf';
```

```
proc dbf db3=temp out=mk1;
```

```
data mk1;
```

```
set mk1;
```

```
/* proc means n mean max min std stderr maxdec=2; */
```

```
/*var mem mef fat proten lactose tm tfp tpp lp tsc fbi open ci tbc; */
```

```
data new1;
```

```
set mk1;
```

```

if mkday<=0 then mkday=.;
    if vlac<=0 or vlac>=15 then vlac=.;

if mem<=2000 or mem>14000 then mem=.;
if mef<=0 then mef=.;
if fat<=0 then fat=.;
if proten<=0 then proten=.;
if lactose<=0 then lactose=.;

if tm<=0 then tm=.;
if tfp<=0 or tfp>=6 then tfp=.;
if tpp<=0 or tpp>=5 then tpp=.;
if lp<=0 or lp>=6 then lp=.;
if un<=0 then un=.;
if cr<=0 then cr=.;
if snf<=0 or snf>=10 then snf=.;
if ts<=0 or ts>=14 then tpp=.;
if tsc<=0 then tsc=.;
if scs<=0 then scs=.;
if sccs<=0 then sccs=.;

if fcd<=18 or fcd>=30 then fcd=.;
if fbi<=21 or fbi>= 180 then fbi=.;
if open<=60 or open>=300 then open=.;
if ci<=300 or ci>=600 then ci=.;
if tbc<=0 or tbc>=10 then tbc=.;

proc means n mean max min std stderr maxdec=2 data=new1;
    var mkday vlac mem mef fat proten lactose tm tfp tpp lp snf ts tsc scs fcd fbi
open ci tbc;

```

```
/*proc univariate freq plot;
```

```
var tsccl;*/
```

```
run;
```

The SAS System

14:47 Tuesday, June 15, 2004 10

The MEANS Procedure

Variable	N	Mean	Maximum	Minimum	Std Dev	Std Error
MKDAY	12180	322.53	3660.00	45.00	181.87	1.65
VLAC	12180	4.84	13.00	1.00	1.47	0.01
MEM	12180	6739.08	13473.00	2018.00	1775.25	16.09
MEF	12180	245.34	9449.00	1.00	164.45	1.49
FAT	12180	271.24	687.00	50.00	88.33	0.80
PROTEN	12180	235.50	609.00	51.00	71.05	0.64
LACTOSE	189	305.31	599.00	106.00	89.10	6.48
TM	12180	17.15	51.00	1.00	7.16	0.06
TFP	12110	4.01	5.99	1.21	0.74	0.01
TPP	10630	3.40	4.97	1.99	0.38	0.00
LP	12180	4.54	5.73	0.97	0.39	0.00
SNF	12067	8.71	9.99	4.46	0.52	0.00
TS	12180	12.75	18.86	6.38	1.09	0.01
TSCC	12180	670.93	26279.00	1.00	1615.43	14.64
SCS	7878	4.22	11.04	0.06	1.98	0.02
FCD	1	29.70	29.70	29.70	.	.
FBI	6000	90.33	179.00	22.00	37.15	0.48
OPEN	6606	158.36	299.00	61.00	66.42	0.82
CI	8694	430.33	599.00	301.00	75.90	0.81

84月齡牛隻擷取檔之胎距性狀統計

```
/* ci92.dbf was edited by ci>=300 .and. ci<=600 */
```

```
filename temp 'c:\dbase\dhi\e193-97.dbf';
```

```
proc dbf db3=temp out=mk;
```

```
data mk;
```

```
set mk;
```

```
if ci>300 and ci<=330 then xci="a";
```

```
if ci>330 and ci<=360 then xci="b";
```

```
if ci>360 and ci<=390 then xci="c";
```

```
if ci>390 and ci<=420 then xci="d";
```

```
if ci>420 and ci<=450 then xci="e";
```

```
if ci>450 and ci<=480 then xci="f";
```

```
if ci>480 and ci<=510 then xci="g";
```

```
if ci>510 and ci<=540 then xci="h";
```

```
if ci>540 and ci<=600 then xci="i";
```

```
run;
```

```
proc means mean stderr n maxdec=2 max min;
```

```
var ci;
```

```
run;
```

```
proc freq;
```

```
table xci;
```

```
run;
```

The MEANS Procedure

Analysis Variable : CI

Mean	Std Error	N	Maximum	Minimum
460.63	2.02	12180	4020.00	0.00

The FREQ Procedure

xci	Frequency	Percent	Cumulative	Cumulative
			Frequency	Percent
a	542	6.23	542	6.23
b	1253	14.40	1795	20.63
c	1441	16.56	3236	37.18
d	1238	14.22	4474	51.41
e	1007	11.57	5481	62.98
f	861	9.89	6342	72.87
g	733	8.42	7075	81.29
h	624	7.17	7699	88.46
i	1004	11.54	8703	100.00

84月齡牛隻擷取檔之空胎日數性狀統計

```
filename temp 'c:\dbase\dhi\e193-97.dbf';  
proc dbf db3=temp out=mk;  
data mk;  
set mk;  
if open<=60 then s="a";  
if open<=90 and open> 60 then s="b";  
if open<=120 and open> 90 then s="c";  
if open<=150 and open> 120 then s="d";  
if open<=180 and open> 150 then s="e";  
if open<=210 and open> 180 then s="f";  
if open>=211 then s="g";  
run;  
proc means mean stderr maxdec=2 max min;  
var open;  
run;  
proc freq;  
table s;  
run;
```

Mean	Std Error	Maximum	Minimum
168.21	1.43	958.00	0.00

The SAS System

14:47 Tuesday, June 15, 2004 14

The FREQ Procedure

s	Frequency	Percent	Cumulative Frequency	Cumulative Percent
a	3305	27.13	3305	27.13
b	1220	10.02	4525	37.15
c	1212	9.95	5737	47.10
d	981	8.05	6718	55.16
e	800	6.57	7518	61.72
f	716	5.88	8234	67.60
g	3946	32.40	12180	100.00

84月齡牛隻擷取檔之體細胞數分數性狀統計

```
filename temp 'c:\dbase\dhi\e193-97.dbf';
```

```
proc dbf db3=temp out=mk;
```

```
data mk;
```

```
set mk;
```

```
if tsc<=17 then s="a";
```

```
if tsc<=35 and tsc>=18 then s="b";
```

```
if tsc<=71 and tsc>=36 then s="c";
```

```

if tsc<=141 and tsc>=72 then s="d";
if tsc<=283 and tsc>=142 then s="e";
if tsc<=565 and tsc>=284 then s="f";
if tsc<=1130 and tsc>=566 then s="g";
if tsc<=2262 and tsc>=1131 then s="h";
if tsc<=4523 and tsc>=2263 then s="i";
if tsc>=4524 and tsc<=9999 then s="j";

run;

proc freq;

table s;

run;

```

The SAS System

14:47 Tuesday, June 15, 2004 17

The FREQ Procedure

s	Frequency	Percent	Cumulative Frequency	Cumulative Percent
a	250	2.06	250	2.06
b	844	6.97	1094	9.04
c	1420	11.73	2514	20.76
d	2101	17.35	4615	38.12
e	2466	20.37	7081	58.49
f	2076	17.15	9157	75.63
g	1410	11.65	10567	87.28
h	848	7.00	11415	94.28
i	471	3.89	11886	98.17

j	221	1.83	12107	100.00
---	-----	------	-------	--------

Frequency Missing = 73