PROC SQL;

CREATE TABLE WORK.query AS

SELECT CASEID , Q1 , STATE , REGION , Q2C1 , Q2C1T1 , Q2C1T2 , Q2C2 , Q2C2T1 , Q2C2T2 , Q3A , Q3B , Q3C , Q3D , Q4 , Q5A , Q5B , Q6CORNA , Q6CORNY , Q6SOYA , Q6SOYY , Q6WHA , Q6WHY , Q6ALFA , Q6ALFY , Q7A , Q7B , Q8A , Q8B , Q8C , Q8D , Q8E , Q8F , Q8G , Q8H , Q9AYN , Q9AAC , Q9ACORN , Q9ASOY , Q9AWHT , Q9AOTH , Q9BYN , Q9BAC , Q9BCORN , Q9BSOY , Q9BWHT , Q9BOTH , Q9CYN , Q9CAC , Q9CCORN , Q9CSOY , Q9CWHT , Q9COTH , Q9DYN , Q9DAC , Q9EYN , Q9EAC , Q9FYN , Q9FAC , Q10A1 , Q10A2 , Q10A3 , Q10A4 , Q10A5 , Q10A6 , Q10A7 , Q10A8 , Q10A9 , Q10A10 , Q10B , Q11A , Q11B , Q11C , Q12A , Q12B , Q12C , Q12D , Q13A , Q13B , Q13C , Q13D , Q14A1 , Q14A2 , Q14A3 , Q14B1 , Q14B2 , Q14B3 , Q15ACHEC , Q15A1 , Q15A2 , Q15A3 , Q15A4 , Q15A5 , Q15A6 , Q15A7 , Q15A8 , Q15A9 , Q15A10 , Q15B , Q16A , Q16B , Q16C , Q16D , Q17A , Q17B , Q17C , Q17D , Q18A , Q18B , Q18C , Q18D , Q19 , Q20 , Q21 , Q22 , Q23 , CITY , STATEID , ZIPCODE , FIPSCODE , COUNTY , TENURE , WHTACRE , CORNACRE , SOYBACRE , HAYACRE , PLNTACRE , BEEFHERD , LATITUDE , LNGITUDE , OUTCOME , REGIONX FROM \_TEMP0.dakota15;

RUN;

QUIT;

PROC DATASETS NOLIST NODETAILS;

CONTENTS DATA=WORK.query OUT=WORK.details;

RUN;

PROC PRINT DATA=WORK.details;

RUN;

/\*thesis \*/

libname sasintro "/folders/myfolders/";

proc print data =sasintro.dakota15;

run;

/\*data cleaning proceess, delete missing variable\*/

data sasintro.dakota15clean;

set sasintro.dakota15;

if Q19 = 9 then Q19=.;

if Q20 = 9 then Q20=.;

if Q21 = 9 then Q21=.;

if Q22 = 9 then Q22=.;

if Q22 = 5 then Q22=.;

if Q23 = 1 then Q23=12;

if Q23 = 2 then Q23=12;

if Q4=7 then Q4=.;

if Q15a1=9 then Q15a1=.;

if Q15a2=9 then Q15a2=.;

if Q15a3=9 then Q15a3=.;

if Q15a4=9 then Q15a4=.;

if Q15a5=9 then Q15a5=.;

if Q15a6=9 then Q15a6=.;

if Q15a7=9 then Q15a7=.;

if Q15a8=9 then Q15a8=.;

if Q15a9=9 then Q15a9=.;

if Q15a10=9 then Q15a10=.;

if Q15b= 99 then Q15b=.;

if Q15ACHEC=9 then Q15ACHEC=.;

run;

proc print data=sasintro.dakota15clean;run;

/\*question 1\*/

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator'

;

run;

proc freq data=sasintro.dakota15;

label Q1 ='Years as a farm opertor';

tables Q1\*State /norow nocol nocum;

format Q1 operation.;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator'

;

run;

proc freq data=sasintro.dakota15;

label Q1 ='Years as a farm opertor';

tables Q1\*Region /norow nocol nocum;

format Q1 operation.;

run;

/\*\* Summary Statistics on 3a with Means\*\*/

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=1;

class State;

var Q3a;

label CaseID='State'

Q3a ='Total Farmland acres';

format CaseID State.;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=1;

class Region;

var Q3a;

label Q3a ='Total Farmland acres';

run;

/\*\* Summary Statistics on 3a, frequency with chisq\*\*/

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15;

tables Q3a\*State /chisq;

format Q3a Farmland. ;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15;

tables Q3a\*Region /chisq;

format Q3a Farmland.;

run;

/\*\* question 10 \*\*/

proc format;

value Impact

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15;

label

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables(Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*STATE/norow;

format Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

\*question 10b;

proc format;

value State

1001-2182,9002='North Dakota'

2183-4000,9001='South Dakota';

value gimpact

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

proc tabulate data=sasintro.dakota15;

class STATE Q10b;

tables Q10b,STATE;

format Q10b gimpact.;

run;

/\*my data anyalysis start \*/

/\* region and state based means analysis question 10a \*/

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=1;

class region;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

run;

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=1;

class state;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

run;

/\*region and State based frequency analysis question 10a \*/

proc format;

value Impact

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15;

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Region / norow nocum;

format CaseID region. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc format;

value Impact

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15;

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*State / norow nocum;

format CaseID State. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

/\*region and State based frequency question 10a with chisq\*/

proc format;

value Impact

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15;

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Region /chisq;

format CaseID region. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc format;

value Impact

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15;

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*State / chisq;

format CaseID State. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

/\* proc tabulute region and state based 10a\*/

proc tabulate data=sasintro.dakota15 format=6.;

class Region;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

table (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10),Region;

run;

proc tabulate data=sasintro.dakota15 format=6.;

class State;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

table (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10),State;

run;

/\* 10b tabulate analysis region and state based \*/

proc format;

value State

1001-2182,9002='North Dakota'

2183-4000,9001='South Dakota';

value gimpact

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

proc tabulate data=sasintro.dakota15;

class STATE Q10b;

tables Q10b,STATE;

format Q10b gimpact.;

run;

proc format;

value State

1001-2182,9002='North Dakota'

2183-4000,9001='South Dakota';

value gimpact

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

run;

proc tabulate data=sasintro.dakota15;

class region;

tables Q10b, Region;

format Q10b gimpact.;

run;

/\* 10b means analysis region and state based \*/

proc format;

value State

1001-2182,9002='North Dakota'

2183-4000,9001='South Dakota';

value gimpact

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=1;

class State;

var Q10B;

format Q10b gimpact.;

run;

proc format;

value State

1001-2182,9002='North Dakota'

2183-4000,9001='South Dakota';

value gimpact

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=1;

class Region;

var Q10B;

format Q10b gimpact.;

run;

/\* 10b frequency distribution analysis region and state based \*/

proc format;

value State

1001-2182,9002='North Dakota'

2183-4000,9001='South Dakota';

value gimpact

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

run;

proc freq data=sasintro.dakota15;

label

Q10B ='Greatest Impact on Changes in Land Use';

tables Q10B \*Region / nocum;

format Q10B gimpact.;

run;

proc format;

value State

1001-2182,9002='North Dakota'

2183-4000,9001='South Dakota';

value gimpact

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

proc freq data=sasintro.dakota15;

label

Q10B ='Greatest Impact on Changes in Land Use';

tables Q10B \*STATE/ norow nocum;

format Q10B gimpact. ;

run;

/\* 10b frequency distribution analysis region and state based with chisq \*/

proc format;

value State

1001-2182,9002='North Dakota'

2183-4000,9001='South Dakota';

value gimpact

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

run;

proc freq data=sasintro.dakota15;

label

Q10B ='Greatest Impact on Changes in Land Use';

tables Q10B \*Region / chisq;

format Q10B gimpact.;

run;

proc format;

value State

1001-2182,9002='North Dakota'

2183-4000,9001='South Dakota';

value gimpact

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

proc freq data=sasintro.dakota15;

label

Q10B ='Greatest Impact on Changes in Land Use';

tables Q10B \*STATE / chisq;

format Q10B gimpact.;

run;

/\* Q10a and means by selected farm operator 19-23 plus 1, 3a and 4\*/

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q19;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label Q19='Respondent Age'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

format Q19 Age.;

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q20;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label Q20='Respondent Gender'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

format Q20 Gender.;

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q21;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label Q21='Respondent Level of Education'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

format Q21 Education.;

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q22;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label Q22='Principal Occupation'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

format Q22 Occupation.;

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q23;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label Q23='Gross farm/ranch sales'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

format Q23 Sales.;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator'

;

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q1;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label Q1 ='Years as a farm opertor'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

format Q1 operation.;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q3a;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label Q3a ='Farmland acres operated in 2014'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

format Q3a Farmland.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q4;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label Q4 ='Best Ownership Status in 2014'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

format Q4 Ownership.;

run;

/\* Q10a and frequency distribution by selected farm operator 19-23 plus 1, 3a and 4\*/

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more'

proc format;

value Impact

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15clean;

label Q19='Respondent Age'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q19/norow;

format Q19 Age. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc freq data=sasintro.dakota15clean;

label Q20='Respondent Gender'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q20/norow;

format Q20 Gender. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc freq data=sasintro.dakota15clean;

label Q21='Respondent Level of Education'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q21/norow;

format Q21 Education. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc freq data=sasintro.dakota15clean;

label Q22='Principal Occupation'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q22/norow;

format Q22 Occupation. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc freq data=sasintro.dakota15clean;

label Q23='Gross farm/ranch sales'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q23/norow;

format Q23 Sales. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator'

;

run;

proc freq data=sasintro.dakota15clean;

label Q1 ='Years as a farm opertor'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q1/norow;

format Q1 Operation. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15clean;

label Q3a ='Farmland Acres Operated in 2014'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q3a/norow;

format Q3a Farmland. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15clean;

label Q4 ='Best Ownersip Status in 2014'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables(Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q4/norow;

format Q4 Ownership. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

/\* 10a frequency distribution by Selected Farm operator(19-23, 1,3a and 4 with chisqu\*/

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

proc format;

value Impact

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15clean;

label Q19='Respondent Age'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q19/chisq;

format Q19 Age. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc freq data=sasintro.dakota15clean;

label Q20='Respondent Gender'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q20/chisq;

format Q20 Gender. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc freq data=sasintro.dakota15clean;

label Q21='Respondent Level of Education'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q21/chisq;

format Q21 Education. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc freq data=sasintro.dakota15clean;

label Q22='Principal Occupation'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q22/chisq;

format Q22 Occupation. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc freq data=sasintro.dakota15clean;

label Q23='Gross farm/ranch sales'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q23/chisq;

format Q23 Sales. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator'

;

run;

proc freq data=sasintro.dakota15clean;

label Q1 ='Years as a farm opertor'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q1/chisq;

format Q1 Operation. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15clean;

label Q3a ='Farmland Acres Operated in 2014'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables (Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q3a/chisq;

format Q3a Farmland. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15clean;

label Q4 ='Best Ownersip Status in 2014'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables(Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*Q4/chisq;

format Q4 Ownership. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

/\*Qestion 3, More complete analysis of land use conversiob decisions (Q9 iteams)

and land use conversion intentions (Q11 items) \*/

/\*part one Q9 analysis with means\*/

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class State;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN ;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response.;

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Region;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN ;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response.;

run;

/\*part one Q9 analysis with frequency\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15clean;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*State/norow;

format Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response.;

run;

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15clean;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\* Region/norow;

format Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response.;

run;

/\*part one Q9 analysis with frequency chisq \*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15clean;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*state/chisq;

format Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response.;

run;

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15clean;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\* Region/chisq;

format Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response.;

run;

/\*part one Q9 analysis with tabulate\*/

proc tabulate data=sasintro.dakota15clean format=6.;

class state;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN), state;

run;

proc tabulate data=sasintro.dakota15clean format=6.;

class Region;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN), Region;

run;

/\*part two Q9 state and region based analysis with means\*/

proc format;

value Farmacres 0 ='0 acres'

1-99 = '1 to 99 acres'

100-179 ='100 to 179 acres'

180-259 ='180 to 259 acres'

260-499 ='260 to 499 acres'

500-high ='500 acrsa and above';

run;

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=1;

var Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC ;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

run;

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=1;

class Region;

var Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC ;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

run;

/\*part two, Q9 state and region based analysis with frequency\*/

proc format;

value Farmacres 0 ='0 acres'

1-99 = '1 to 99 acres'

100-179 ='100 to 179 acres'

180-259 ='180 to 259 acres'

260-499 ='260 to 499 acres'

500-high ='500 acres and above';

run;

proc freq data=sasintro.dakota15;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC)\*state/norow;

format Q9aAC Farmacres. Q9bAC Farmacres. Q9cAC Farmacres. Q9dAC Farmacres.

Q9eAC Farmacres. Q9fAC Farmacres.;

run;

proc freq data=sasintro.dakota15;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC)\*Region/norow;

format Q9aAC Farmacres. Q9bAC Farmacres. Q9cAC Farmacres. Q9dAC Farmacres.

Q9eAC Farmacres. Q9fAC Farmacres.;

run;

/\*part two, Q9 state and region based analysis with frequency with chisq\*/

proc format;

value Farmacres 0 ='0 acres'

1-99 = '1 to 99 acres'

100-179 ='100 to 179 acres'

180-259 ='180 to 259 acres'

260-499 ='260 to 499 acres'

500-high ='500 acrsa and above';

run;

proc freq data=sasintro.dakota15;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC)\*state/chisq;

format Q9aAC Farmacres. Q9bAC Farmacres. Q9cAC Farmacres. Q9dAC Farmacres.

Q9eAC Farmacres. Q9fAC Farmacres.;

run;

proc freq data=sasintro.dakota15;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC)\*Region/chisq;

format Q9aAC Farmacres. Q9bAC Farmacres. Q9cAC Farmacres. Q9dAC Farmacres.

Q9eAC Farmacres. Q9fAC Farmacres.;

run;

/\*part two, state and region Q9 analysis with tabulate\*/

proc tabulate data=sasintro.dakota15 format=6.;

class state;

var Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC),state;

run;

proc tabulate data=sasintro.dakota15 format=6.;

class Region;

var Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC), Region;

run;

/\* Q9 part three state and region based analysis tabulate\*/

proc format;

value response

0='No'

1='Yes';

proc tabulate data=sasintro.dakota15;

class state Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

table (Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth),state;

format Q9aCorn response. Q9aSoy response. Q9aWht response. Q9aOth response.

Q9bCorn response. Q9bSoy response. Q9bWht response. Q9bOth response.

Q9cCorn response. Q9cSoy response. Q9cWht response. Q9cOth response.;

run;

proc format;

value response

0='No'

1='Yes';

proc tabulate data=sasintro.dakota15;

class Region Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

table (Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth),Region;

format Q9aCorn response. Q9aSoy response. Q9aWht response. Q9aOth response.

Q9bCorn response. Q9bSoy response. Q9bWht response. Q9bOth response.

Q9cCorn response. Q9cSoy response. Q9cWht response. Q9cOth response.;

run;

/\* Q9 part three state and region based analysis frequency\*/

proc format;

value Response

1='Yes'

0 ='No';

run;

proc freq data=sasintro.dakota15;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

table (Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth)\*state/norow;

format Q9aCorn response. Q9aSoy response. Q9aWht response. Q9aOth response.

Q9bCorn response. Q9bSoy response. Q9bWht response. Q9bOth response.

Q9cCorn response. Q9cSoy response. Q9cWht response. Q9cOth response.;

run;

proc format;

value Response

1='Yes'

0 ='No';

run;

proc freq data=sasintro.dakota15;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

table (Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth)\*Region/norow;

format Q9aCorn response. Q9aSoy response. Q9aWht response. Q9aOth response.

Q9bCorn response. Q9bSoy response. Q9bWht response. Q9bOth response.

Q9cCorn response. Q9cSoy response. Q9cWht response. Q9cOth response.;

run;

/\* Q9 part three state and region based analysis frequency with chisq\*/

proc format;

value Response

1='Yes'

0 ='No';

run;

proc freq data=sasintro.dakota15;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

table (Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth)\*state/chisq;

format Q9aCorn response. Q9aSoy response. Q9aWht response. Q9aOth response.

Q9bCorn response. Q9bSoy response. Q9bWht response. Q9bOth response.

Q9cCorn response. Q9cSoy response. Q9cWht response. Q9cOth response.;

run;

proc format;

value Response

1='Yes'

0 ='No';

run;

proc freq data=sasintro.dakota15;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

table (Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth)\*Region/chisq;

format Q9aCorn response. Q9aSoy response. Q9aWht response. Q9aOth response.

Q9bCorn response. Q9bSoy response. Q9bWht response. Q9bOth response.

Q9cCorn response. Q9cSoy response. Q9cWht response. Q9cOth response.;

run;

/\* Q9 part three state and region based analysis with means\*/

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=1;

class State;

var Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth ;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

run;

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=1;

class Region;

var Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth ;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

run;

/\* means by selected farm operator Q9 part one \*19, 20,21, 22, 23 plus 1, 3a and 4 \*/

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q19;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label Q19='Respondent Age'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format Q19 Age.;

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q20;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label Q20='Respondent Gender'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format Q20 Gender.;

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q21;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label Q21='Respondent Level of Education'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format Q21 Education.;

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q22;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label Q22='Principal Occupation'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format Q22 Occupation.;

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q23;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label Q23='Gross farm/ranch sales'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format Q23 Sales.;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator'

;

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q1;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label Q1 ='Years as a farm opertor'

Q23='Gross farm/ranch sales'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format Q1 operation.;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q3A;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label Q3A ='Farmland Acres Operated in 2014'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format Q3A Farmland.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc means data=sasintro.dakota15clean n nmiss sum min max mean std maxdec=1;

class Q4;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label Q4 ='Best Ownership Status in 2014'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format Q4 Ownership.;

run;

/\* cross tab chi square test, Q9 part one region and state based, 19, 20, 21, 22, 23, \*/

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15clean;

label Q19='Respondent Age'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

tables (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*Q19/chisq;

format Q19 Age. Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response. ;

run;

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15clean;

label Q20='Respondent Gender'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

tables (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*Q20/chisq;

format Q20 Gender. Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response. ;

run;

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15clean;

label Q21='Respondent Level of Education'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

tables (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*Q21/chisq;

format Q21 Education. Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response. ;

run;

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15clean;

label Q22='Principal Occupation'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

tables (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*Q22/chisq;

format Q22 Occupation. Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response. ;

run;

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15clean;

label Q23= 'Gross farm/ranch sales'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

tables (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*Q23/chisq;

format Q23 Sales. Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response. ;

run;

proc format;

value Response

1='Yes'

2='No';

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator'

;

run;

proc freq data=sasintro.dakota15clean;

label Q1= 'Year As a Farm Operator'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

tables (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*Q1/chisq;

format Q1 Operation. Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response. ;

run;

proc format;

value Response

1='Yes'

2='No';

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15clean;

label Q3A= 'Farmland Acres Operated in 2014'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

tables (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*Q3A/chisq;

format Q3A Farmland. Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response. ;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15clean;

label Q4= 'Best Ownership Status in 2014'

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

tables (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*Q4/chisq;

format Q4 Ownership. Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response. ;

run;

/\*\* question 11 frequency analysis State and Region Based\*\*/

proc format;

value Future

1='Yes'

2='No'

3='Dont Know';

run;

proc freq data=sasintro.dakota15;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*state/norow;

format Q11a Future. Q11b Future. Q11c Future.;

run;

proc format;

value Future

1='Yes'

2='No'

3='Dont Know';

run;

proc freq data=sasintro.dakota15;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\* Region/norow;

format Q11a Future. Q11b Future. Q11c Future.;

run;

/\*\* question 11 frequency analysis State and Region Based with chisq \*\*/

proc format;

value Future

1='Yes'

2='No'

3='Dont Know';

run;

proc freq data=sasintro.dakota15;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*state/chisq;

format Q11a Future. Q11b Future. Q11c Future.;

run;

proc format;

value Future

1='Yes'

2='No'

3='Dont Know';

run;

proc freq data=sasintro.dakota15;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\* Region/chisq;

format Q11a Future. Q11b Future. Q11c Future.;

run;

/\*\* question 11 Tabulate analysis State and Region Based\*\*/

proc tabulate data=sasintro.dakota15 format=10.;

class State;

var Q11a Q11b Q11c;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

table (state),(Q11a Q11b Q11c);

format Q11a Future. Q11b Future. Q11c Future.;

run;

proc tabulate data=sasintro.dakota15 format=10.;

class Region;

var Q11a Q11b Q11c;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

table (Region),(Q11a Q11b Q11c);

format Q11a Future. Q11b Future. Q11c Future.;

run;

/\*\* question 11 means analysis State and Region Based\*\*/

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=0;

class State;

var Q11a Q11b Q11c;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

format Q11a Future. Q11b Future. Q11c Future.;

run;

proc means data=sasintro.dakota15 n nmiss sum min max mean std maxdec=0;

class Region;

var Q11a Q11b Q11c;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

format Q11a Future. Q11b Future. Q11c Future.;

run;

/\* Q11 selected farm operator/business characteristics of responses plus 1, 3a and 4\*/

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over'

value Gender

1='Male'

2='Female'

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)'

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired'

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc format;

value Future

1='Yes'

2='No'

3='Dont Know';

run;

proc freq data=sasintro.dakota15clean;

label Q19='Respondent Age'

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*Q19/chisq;

format Q19 Age. Q11a Future. Q11b Future. Q11c Future.;

run;

proc freq data=sasintro.dakota15clean;

label Q20='Respondent Gender'

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*Q20/chisq;

format Q20 Gender. Q11a Future. Q11b Future. Q11c Future.;

run;

proc freq data=sasintro.dakota15clean;

label Q21='Respondent Level of Education'

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*Q21/chisq;

format Q21 Education. Q11a Future. Q11b Future. Q11c Future.;

run;

proc freq data=sasintro.dakota15clean;

label Q22='Principal Occupation'

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*Q22/chisq;

format Q22 Occupation. Q11a Future. Q11b Future. Q11c Future.;

run;

proc freq data=sasintro.dakota15clean;

label Q23='Gross farm/ranch sales'

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*Q23/chisq;

format Q23 Sales. Q11a Future. Q11b Future. Q11c Future.;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator'

;

run;

proc freq data=sasintro.dakota15clean;

label Q1='Years as a farm opertor'

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*Q1/chisq;

format Q1 Operation. Q11a Future. Q11b Future. Q11c Future.;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15clean;

label Q3A='Farmland Acres Operated in 2014'

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*Q3A/chisq;

format Q3A Farmland. Q11a Future. Q11b Future. Q11c Future.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15clean;

label Q4='Ownership Status in 2014'

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*Q4/chisq;

format Q4 Ownership. Q11a Future. Q11b Future. Q11c Future.;

run;

/\*\*\* Chi square analysis Q10a vs Q9 \*\*/

/\*\* 9dYN,9eYN,9fYN versus 10a1\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15;

label

Q9dYN='Conversion of CRP land to pasture/hay'

Q10a1='Changing of crop prices';

tables Q10a1\* Q9dYN / chisq;

format Q10a1 Impact. Q9dYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9eYN='Enrollment of farmland acres to CRP'

Q10a1='Changing of crop prices';

tables Q10a1\*Q9eYN / chisq;

format Q10a1 Impact. Q9eYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program'

Q10a1='Changing of crop prices';

tables Q10a1\*Q9fYN / chisq;

format Q10a1 Impact. Q9fYN Response.;

run;

/\*\* 9dYN,9eYN,9fYN versus 10a2\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15;

label

Q9dYN='Conversion of CRP land to pasture/hay'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)';

tables Q10a2\* Q9dYN / chisq;

format Q10a2 Impact. Q9dYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9eYN='Enrollment of farmland acres to CRP'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)';

tables Q10a2\*Q9eYN / chisq;

format Q10a2 Impact. Q9eYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)';

tables Q10a2\*Q9fYN / chisq;

format Q10a2 Impact. Q9fYN Response.;

run;

/\*\* 9dYN,9eYN,9fYN versus 10a3\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15;

label

Q9dYN='Conversion of CRP land to pasture/hay'

Q10a3='Availability of crop and revenue insurance policies';

tables Q10a3\* Q9dYN / chisq;

format Q10a3 Impact. Q9dYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9eYN='Enrollment of farmland acres to CRP'

Q10a3='Availability of crop and revenue insurance policies';

tables Q10a3\*Q9eYN / chisq;

format Q10a3 Impact. Q9eYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program'

Q10a3='Availability of crop and revenue insurance policies';

tables Q10a3\*Q9fYN / chisq;

format Q10a3 Impact. Q9fYN Response.;

run;

/\*\* 9dYN,9eYN,9fYN versus 10a4\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15;

label

Q9dYN='Conversion of CRP land to pasture/hay'

Q10a4='Availability of drought-tolerant seed';

tables Q10a4\* Q9dYN / chisq;

format Q10a4 Impact. Q9dYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9eYN='Enrollment of farmland acres to CRP'

Q10a4='Availability of drought-tolerant seed';

tables Q10a4\*Q9eYN / chisq;

format Q10a4 Impact. Q9eYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program'

Q10a4='Availability of drought-tolerant seed';

tables Q10a4\*Q9fYN / chisq;

format Q10a4 Impact. Q9fYN Response.;

run;

/\*\* 9dYN,9eYN,9fYN versus 10a5\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15;

label

Q9dYN='Conversion of CRP land to pasture/hay'

Q10a5='Developments in pest management practices, including pest management seed traits';

tables Q10a5\* Q9dYN / chisq;

format Q10a5 Impact. Q9dYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9eYN='Enrollment of farmland acres to CRP'

Q10a5='Developments in pest management practices, including pest management seed traits';

tables Q10a5\*Q9eYN / chisq;

format Q10a5 Impact. Q9eYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program'

Q10a5='Developments in pest management practices, including pest management seed traits';

tables Q10a5\*Q9fYN / chisq;

format Q10a5 Impact. Q9fYN Response.;

run;

/\*\* 9dYN,9eYN,9fYN versus 10a6\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15;

label

Q9dYN='Conversion of CRP land to pasture/hay'

Q10a6='Improved crop yields (other than seed related traits)';

tables Q10a6\* Q9dYN / chisq;

format Q10a6 Impact. Q9dYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9eYN='Enrollment of farmland acres to CRP'

Q10a6='Improved crop yields (other than seed related traits)';

tables Q10a6\*Q9eYN / chisq;

format Q10a6 Impact. Q9eYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program'

Q10a6='Improved crop yields (other than seed related traits';

tables Q10a6\*Q9fYN / chisq;

format Q10a6 Impact. Q9fYN Response.;

run;

/\*\* 9dYN,9eYN,9fYN versus 10a7\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15;

label

Q9dYN='Conversion of CRP land to pasture/hay'

Q10a7='Development of more efficient cropping equipment';

tables Q10a7\* Q9dYN / chisq;

format Q10a7 Impact. Q9dYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9eYN='Enrollment of farmland acres to CRP'

Q10a7='Development of more efficient cropping equipment';

tables Q10a7\*Q9eYN / chisq;

format Q10a7 Impact. Q9eYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program'

Q10a7='Development of more efficient cropping equipment';

tables Q10a7\*Q9fYN / chisq;

format Q10a7 Impact. Q9fYN Response.;

run;

/\*\* 9dYN,9eYN,9fYN versus 10a8\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15;

label

Q9dYN='Conversion of CRP land to pasture/hay'

Q10a8='Labor availability problems';

tables Q10a8\* Q9dYN / chisq;

format Q10a8 Impact. Q9dYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9eYN='Enrollment of farmland acres to CRP'

Q10a8='Labor availability problems';

tables Q10a8\*Q9eYN / chisq;

format Q10a8 Impact. Q9eYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program'

Q10a8='Labor availability problems';

tables Q10a8\*Q9fYN / chisq;

format Q10a8 Impact. Q9fYN Response.;

run;

/\*\* 9aYN,9bYN,9cYN versus 10a9\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15;

label

Q9dYN='Conversion of CRP land to pasture/hay'

Q10a9='Improving wildlife habitat';

tables Q10a9\* Q9dYN / chisq;

format Q10a9 Impact. Q9dYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9eYN='Enrollment of farmland acres to CRP'

Q10a9='Improving wildlife habitat';

tables Q10a9\*Q9eYN / chisq;

format Q10a9 Impact. Q9eYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program'

Q10a9='Improving wildlife habitat';

tables Q10a9\*Q9fYN / chisq;

format Q10a9 Impact. Q9fYN Response.;

run;

/\*\* 9aYN,9bYN,9cYN versus 10a10\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15;

label

Q9dYN='Conversion of CRP land to pasture/hay'

Q10a10='Changing weather /climate patterns';

tables Q10a10\* Q9dYN / chisq;

format Q10a10 Impact. Q9dYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9eYN='Enrollment of farmland acres into CRP'

Q10a10='Changing weather /climate patterns';

tables Q10a10\*Q9eYN / chisq;

format Q10a10 Impact. Q9eYN Response.;

run;

proc freq data=sasintro.dakota15;

label

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program'

Q10a10='Changing weather /climate patterns';

tables Q10a10\*Q9fYN / chisq;

format Q10a10 Impact. Q9fYN Response.;

run;

/\*\*logistic regression\*\*/

data sasintro.dakota15reg;

set sasintro.dakota15clean;

if (Q9aYN=1) then NQ9aYN=0;

if (Q9aYN=2) then NQ9aYN=1;

if (Q9bYN=1) then NQ9bYN=0;

if (Q9bYN=2) then NQ9bYN=1;

if (Q9cYN=1) then NQ9cYN=0;

if (Q9cYN=2) then NQ9cYN=1;

if (Q9dYN=1) then NQ9dYN=0;

if (Q9dYN=2) then NQ9dYN=1;

if (Q9eYN=1) then NQ9eYN=0;

if (Q9eYN=2) then NQ9eYN=1;

if (Q9fYN=1) then NQ9fYN=0;

if (Q9fYN=2) then NQ9fYN=1;

run;

proc print data=sasintro.dakota15reg;

run;

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator'

;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9aYN='Conversion of native grass to cropland';

class NQ9aYN state/ param=ref;

model NQ9aYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 state /rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9aYN Regroup. ;

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9bYN='Conversion of tame grassland to cropland';

class NQ9bYN state / param=ref;

model NQ9bYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 state/rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9bYN Regroup.;

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9cYN='Conversion of CRP land to cropland';

class NQ9cYN state / param=ref;

model NQ9cYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 state /rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9cYN Regroup.;

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9dYN='Conversion of CRP land to pasture/hay';

class NQ9dYN state / param=ref;

model NQ9dYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 state /rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9dYN Regroup.;

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9eYN='Enrollment of farmland acres into CRP';

class NQ9eYN state / param=ref;

model NQ9eYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 state /rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9eYN Regroup.;

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9fYN state / param=ref;

model NQ9fYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 state/rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9fYN Regroup.;

run;

/\*Region based Regression\*/

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator'

;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9aYN='Conversion of native grass to cropland';

class NQ9aYN Region / param=ref;

model NQ9aYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 Region /rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9aYN Regroup.;

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9bYN='Conversion of tame grassland to cropland';

class NQ9bYN Region/ param=ref;

model NQ9bYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 Region /rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9bYN Regroup.;

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9cYN='Conversion of CRP land to cropland';

class NQ9cYN Region/ param=ref;

model NQ9cYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 Region /rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9cYN Regroup.;

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1='Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9dYN='Conversion of CRP land to pasture/hay';

class NQ9dYN Region / param=ref;

model NQ9dYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 Region /rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9dYN Regroup.;

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9eYN='Enrollment of farmland acres into CRP';

class NQ9eYN Region / param=ref;

model NQ9eYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 Region /rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9eYN Regroup.;

run;

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9fYN Region / param=ref;

model NQ9fYN = Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4 Region /rsquare;

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. NQ9fYN Regroup.;

run;

/\*extra analysis start\*/

proc format;

value Regroup

0='Yes'

1='No';

run;

proc logistic data=sasintro.dakota15reg;

label CaseID='State'

Q19='Respondent Age'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID / param=ref;

model Q19 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID /rsquare;

format Q19 Age. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup. CaseID State.;

run;

proc logistic data=sasintro.dakota15reg;

label

Q19='Respondent Age'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region / param=ref;

model Q19 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region /rsquare;

format Q19 Age. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup.;

run;

proc logistic data=sasintro.dakota15reg;

label CaseID='State'

Q20='Respondent Gender'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID / param=ref;

model Q20 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID /rsquare;

format Q20 Gender. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup. CaseID State.;

run;

proc logistic data=sasintro.dakota15reg;

label

Q20='Respondent Gender'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region / param=ref;

model Q20 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region /rsquare;

format Q20 Gender. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup.;

run;

proc logistic data=sasintro.dakota15reg;

label CaseID='State'

Q21='Respondent Level of Education'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID / param=ref;

model Q21 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID /rsquare;

format Q21 Education. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup. CaseID State.;

run;

proc logistic data=sasintro.dakota15reg;

label

Q21='Respondent Level of Education'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region / param=ref;

model Q21 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region /rsquare;

format Q21 Education. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup.;

run;

proc logistic data=sasintro.dakota15reg;

label CaseID='State'

Q22='Principal Occupation'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID / param=ref;

model Q22 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID /rsquare;

format Q22 Occupation. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup. CaseID State.;

run;

proc logistic data=sasintro.dakota15reg;

label

Q22='Principal Occupation'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region / param=ref;

model Q22 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region /rsquare;

format Q22 Occupation. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup.;

run;

proc logistic data=sasintro.dakota15reg;

label CaseID='State'

Q23='Gross farm/ranch sales'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID / param=ref;

model Q23 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID /rsquare;

format Q23 Sales. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup. CaseID State.;

run;

proc logistic data=sasintro.dakota15reg;

label

Q23='Gross farm/ranch sales'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region / param=ref;

model Q23 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region /rsquare;

format Q23 Sales. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup.;

run;

proc logistic data=sasintro.dakota15reg;

label CaseID='State'

Q1='Years as a farm opertor'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID / param=ref;

model Q1 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID /rsquare;

format Q1 Operation. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup. CaseID State.;

run;

proc logistic data=sasintro.dakota15reg;

label

Q1='Years as a farm opertor'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region / param=ref;

model Q1 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region /rsquare;

format Q1 Operation. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup.;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc logistic data=sasintro.dakota15reg;

label CaseID='State'

Q3a='Farmland acres operated in 2014'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID / param=ref;

model Q3a = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID /rsquare;

format Q3a Farmland. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup. CaseID State.;

run;

proc logistic data=sasintro.dakota15reg;

label

Q3a='Farmland acres operated in 2014'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region / param=ref;

model Q3a = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region /rsquare;

format Q3a Farmland. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc logistic data=sasintro.dakota15reg;

label CaseID='State'

Q4='Ownersip Status in 2014'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID / param=ref;

model Q4 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN CaseID /rsquare;

format Q4 Ownership. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup. CaseID State.;

run;

proc logistic data=sasintro.dakota15reg;

label

Q4='Ownersip Status in 2014'

NQ9aYN='Conversion of native grass to cropland'

NQ9bYN='Conversion of tamend grassland to cropland'

NQ9cYN='Conversion of CRP land to cropland'

NQ9dYN='Conversion of CRP land to pasture/hay'

NQ9eYN='Enrollment of farmland acres to CRP'

NQ9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

class NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region / param=ref;

model Q4 = NQ9aYN NQ9bYN NQ9cYN NQ9dYN NQ9eYN NQ9fYN Region /rsquare;

format Q4 Ownership. NQ9aYN regroup. NQ9bYN regroup. NQ9cYN regroup. NQ9dYN regroup. NQ9eYN regroup. NQ9fYN regroup.;

run;

/\*extra analysis end \*/

/\* Q10 related regression analysis start \*/

data sasintro.dakota15regQ10a;

set sasintro.dakota15clean;

if (Q10a1=1) then NQ10a1=0;

if (Q10a1=2) or (Q10a1=3) then NQ10a1=1;

if (Q10a1=4) or (Q10a1=5) then NQ10a1=2;

if (Q10a2=1) then NQ10a2=0;

if (Q10a2=2) or (Q10a2=3) then NQ10a2=1;

if (Q10a2=4) or (Q10a2=5) then NQ10a2=2;

if (Q10a10=1) then NQ10a10=0;

if (Q10a10=2) or (Q10a10=3) then NQ10a10=1;

if (Q10a10=4) or (Q10a10=5) then NQ10a10=2;

if (Q10a7=1) then NQ10a7=0;

if (Q10a7=2) or (Q10a7=3) then NQ10a7=1;

if (Q10a7=4) or (Q10a7=5) then NQ10a7=2;

if (Q10a6=1) then NQ10a6=0;

if (Q10a6=2) or (Q10a6=3) then NQ10a6=1;

if (Q10a6=4) or (Q10a6=5) then NQ10a6=2;

if (Q10a3=1) then NQ10a3=0;

if (Q10a3=2) or (Q10a3=3) then NQ10a3=1;

if (Q10a3=4) or (Q10a3=5) then NQ10a3=2;

if (Q10a5=1) then NQ10a5=0;

if (Q10a5=2) or (Q10a5=3) then NQ10a5=1;

if (Q10a5=4) or (Q10a5=5) then NQ10a5=2;

if (Q10a8=1) then NQ10a8=0;

if (Q10a8=2) or (Q10a8=3) then NQ10a8=1;

if (Q10a8=4) or (Q10a8=5) then NQ10a8=2;

if (Q10a9=1) then NQ10a9=0;

if (Q10a9=2) or (Q10a9=3) then NQ10a9=1;

if (Q10a9=4) or (Q10a9=5) then NQ10a9=2;

if (Q10a4=1) then NQ10a4=0;

if (Q10a4=2) or (Q10a4=3) then NQ10a4=1;

if (Q10a4=4) or (Q10a4=5) then NQ10a4=2;

run;

proc print data=sasintro.dakota15regQ10a;

run;

proc format;

value Reformat

0='No Impact'

1='Some Impact'

2='Great Impact';

run;

proc GLM data=sasintro.dakota15regQ10a;

class NQ10a1 region;

level NQ10a1='Changing crop prices';

model NQ10a1=region;

format NQ10a1 reformat.;

run;

proc GLM data=sasintro.dakota15regQ10a;

class NQ10a2 region;

Level Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)';

model NQ10a2=region;

format NQ10a2 reformat.;

run;

proc GLM data=sasintro.dakota15regQ10a;

class NQ10a3 region;

Level Q10a3='Availability of crop and revenue insurance policies';

model NQ10a3=region;

format NQ10a3 reformat.;

run;

proc GLM data=sasintro.dakota15regQ10a;

class NQ10a4 region;

Level NQ10a4='Availability of drought-tolerant seed';

model NQ10a4=region;

format NQ10a4 reformat.;

run;

proc GLM data=sasintro.dakota15regQ10a;

class NQ10a5 region;

Level NQ10a5='Developments in pest management practices, including pest management seed traits';

model NQ10a5=region;

format NQ10a5 reformat.;

run;

proc GLM data=sasintro.dakota15regQ10a;

class NQ10a6 region;

Level NQ10a6='Improved crop yields (other than seed related traits)';

model NQ10a6=region;

format NQ10a6 reformat.;

run;

proc GLM data=sasintro.dakota15regQ10a;

class NQ10a7 region;

Level NQ10a7='Development of more efficient cropping equipment';

model NQ10a7=region;

format NQ10a7 reformat.;

run;

proc GLM data=sasintro.dakota15regQ10a;

class NQ10a7 region;

Level NQ10a7='Development of more efficient cropping equipment';

model NQ10a7=region;

format NQ10a7 reformat.;

run;

proc GLM data=sasintro.dakota15regQ10a;

class NQ10a8 region;

Level NQ10a8='Labor availability problems';

model NQ10a8=region;

format NQ10a8 reformat.;

run;

proc GLM data=sasintro.dakota15regQ10a;

class NQ10a9 region;

Level NQ10a9='Improving wildlife habitat';

model NQ10a9=region;

format NQ10a9 reformat.;

run;

proc GLM data=sasintro.dakota15regQ10a;

class NQ10a10 region;

Level NQ10a10='Changing weather /climate patterns';

model NQ10a10=region;

format NQ10a10 reformat.;

run;

/\* Q10a related latest regression \*/

proc format;

value Impact

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc GLM data=sasintro.dakota15clean;

class Q10a1 region;

level Q10a1='Changing crop prices';

model Q10a1=region;

format Q10a1 impact.;

run;

proc GLM data=sasintro.dakota15clean;

class Q10a2 region;

Level Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)';

model Q10a2=region;

format Q10a2 impact.;

run;

proc GLM data=sasintro.dakota15clean;

class Q10a3 region;

Level Q10a3='Availability of crop and revenue insurance policies';

model Q10a3=region;

format Q10a3 impact.;

run;

proc GLM data=sasintro.dakota15clean;

class NQ10a4 region;

Level Q10a4='Availability of drought-tolerant seed';

model Q10a4=region;

format Q10a4 impact.;

run;

proc GLM data=sasintro.dakota15clean;

class Q10a5 region;

Level Q10a5='Developments in pest management practices, including pest management seed traits';

model Q10a5=region;

format Q10a5 impact.;

run;

proc GLM data=sasintro.dakota15clean;

class Q10a6 region;

Level Q10a6='Improved crop yields (other than seed related traits)';

model Q10a6=region;

format Q10a6 impact.;

run;

proc GLM data=sasintro.dakota15clean;

class Q10a7 region;

Level Q10a7='Development of more efficient cropping equipment';

model Q10a7=region;

format Q10a7 impact.;

run;

proc GLM data=sasintro.dakota15clean;

class Q10a7 region;

Level Q10a7='Development of more efficient cropping equipment';

model Q10a7=region;

format Q10a7 impact.;

run;

proc GLM data=sasintro.dakota15clean;

class Q10a8 region;

Level Q10a8='Labor availability problems';

model Q10a8=region;

format Q10a8 impact.;

run;

proc GLM data=sasintro.dakota15clean;

class Q10a9 region;

Level Q10a9='Improving wildlife habitat';

model Q10a9=region;

format Q10a9 impact.;

run;

proc GLM data=sasintro.dakota15clean;

class Q10a10 region;

Level Q10a10='Changing weather /climate patterns';

model Q10a10=region;

format Q10a10 impact.;

run;

/\* Q10a related regression analysis extra not related \*/

/\*creating region numeric\*/

data sasintro.dakota15num;

set sasintro.dakota15;

if Region='East North Dakota' then Region=1;

if Region='Central North Dakota' then Region=2;

if Region='North Central South Dakota' then Region=3;

if Region='Central South Dakota' then Region=4;

if Region='East Central South Dakota' then Region=5;

if Region='North East South Dakota' then Region=6;

if (Q10a1=1) then NQ10a1=0;

if (Q10a1=2) or (Q10a1=3) then NQ10a1=1;

if (Q10a1=4) or (Q10a1=5) then NQ10a1=2;

if (Q10a2=1) then NQ10a2=0;

if (Q10a2=2) or (Q10a2=3) then NQ10a2=1;

if (Q10a2=4) or (Q10a2=5) then NQ10a2=2;

if (Q10a10=1) then NQ10a10=0;

if (Q10a10=2) or (Q10a10=3) then NQ10a10=1;

if (Q10a10=4) or (Q10a10=5) then NQ10a10=2;

if (Q10a7=1) then NQ10a7=0;

if (Q10a7=2) or (Q10a7=3) then NQ10a7=1;

if (Q10a7=4) or (Q10a7=5) then NQ10a7=2;

if (Q10a6=1) then NQ10a6=0;

if (Q10a6=2) or (Q10a6=3) then NQ10a6=1;

if (Q10a6=4) or (Q10a6=5) then NQ10a6=2;

if (Q10a3=1) then NQ10a3=0;

if (Q10a3=2) or (Q10a3=3) then NQ10a3=1;

if (Q10a3=4) or (Q10a3=5) then NQ10a3=2;

if (Q10a5=1) then NQ10a5=0;

if (Q10a5=2) or (Q10a5=3) then NQ10a5=1;

if (Q10a5=4) or (Q10a5=5) then NQ10a5=2;

if (Q10a8=1) then NQ10a8=0;

if (Q10a8=2) or (Q10a8=3) then NQ10a8=1;

if (Q10a8=4) or (Q10a8=5) then NQ10a8=2;

if (Q10a9=1) then NQ10a9=0;

if (Q10a9=2) or (Q10a9=3) then NQ10a9=1;

if (Q10a9=4) or (Q10a9=5) then NQ10a9=2;

if (Q10a4=1) then NQ10a4=0;

if (Q10a4=2) or (Q10a4=3) then NQ10a4=1;

if (Q10a4=4) or (Q10a4=5) then NQ10a4=2;

run;

proc print data=sasintro.dakota15num;

run;

proc format;

value regroup

0='No Impact'

1='Some Impact'

2='Great Impact';

run;

/\*proc format;

value geografic

1 ='East North Dakota'

2='Central North Dakota'

3='North Central South Dakota'

4='Central South Dakota'

5='East Central South Dakota'

6='North East South Dakota';

run; \*/

proc logistic data=sasintro.dakota15num;

label

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

class NQ10a1 NQ10a2 NQ10a3 NQ10a4 NQ10a5 NQ10a6 NQ10a7 NQ10a8 NQ10a9 NQ10a10 region / param=ref;

model Region = NQ10a1 NQ10a2 NQ10a3 NQ10a4 NQ10a5 NQ10a6 NQ10a7 NQ10a8 NQ10a9 NQ10a10 /rsquare;

format NQ10a1 regroup. NQ10a2 regroup. NQ10a3 regroup. NQ10a4 regroup. NQ10a5 regroup. NQ10a6 regroup.

NQ10a7 regroup. NQ10a8 regroup. NQ10a9 regroup. NQ10a10 regroup.;

run;

proc logistic data=sasintro.dakota15num;

label CaseID='State'

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

class NQ10a1 NQ10a2 NQ10a3 NQ10a4 NQ10a5 NQ10a6 NQ10a7 NQ10a8 NQ10a9 NQ10a10 CaseID / param=ref;

model CaseID = NQ10a1 NQ10a2 NQ10a3 NQ10a4 NQ10a5 NQ10a6 NQ10a7 NQ10a8 NQ10a9 NQ10a10 /rsquare;

format NQ10a1 regroup. NQ10a2 regroup. NQ10a3 regroup. NQ10a4 regroup. NQ10a5 regroup. NQ10a6 regroup.

NQ10a7 regroup. NQ10a8 regroup. NQ10a9 regroup. NQ10a10 regroup. CaseID State.;

run;

/\* Are there land use changes reported by farmers during the past 10 year

in the context of farmers expanding, contracting, or remaining the same size

(in terms of acres operated) during the past 10 yeras?\*/

/\*\* question 5a\*\*/

proc format;

value Currentacres

1 = 'Fewer acres than 10 years ago (by over 10%)'

2 = 'No change or a minor change'

3 = 'More acres than 10 years ago (by over 10%)';

proc freq data=sasintro.dakota15;

label CaseID='State'

Q5a ='Cropland acres operated';

tables Q5a\*CaseID / norow nocum;

format Q5a Currentacres. CaseID State.;

run;

/\*\* question 5b\*\*/

proc format;

value Currentacres

1 = 'Fewer acres than 10 years ago (by over 10%)'

2 = 'No change or a minor change'

3 = 'More acres than 10 years ago (by over 10%)';

proc freq data=sasintro.dakota15;

label CaseID='State'

Q5b ='Pasture/rangeland acres operated';

tables Q5b\*CaseID / norow nocum;

format Q5b Currentacres. CaseID State.;

run;

/\* develop a composite variable GRASCROP to include any respondent that

made a grass/CRP conversion to cropland decison:

yes respondent answered yes or code=1 to convert native grassland to cropland \*/

data sasintro.dakota15reg1;

set sasintro.dakota15clean;

GRASCROP=0;

if (Q9aYN=1) or (Q9bYN=1) or (Q9CYN=1) then GRASCROP=1;

if (Q9aYN=.) or (Q9bYN=.) or (Q9CYN=.) then GRASCROP=.;

CRPUSE=0;

if (Q9cYN=1) or (Q9dYN=1) or (Q9eYN=1) then CRPUSE=1;

if (Q9cYN=.) or (Q9dYN=.) or (Q9eYN=.) then CRPUSE=.;

RUN;

proc print data=sasintro.dakota15reg1;run;

/\*data sasintro.dakota15reg2;

set sasintro.dakota15reg1;

GCROP=.;

GCROP= (Q9AYN\*100)+(Q9BYN\*10)+Q9CYN;

RUN;

proc print data=sasintro.dakota15reg2;run;

data sasintro.dakota15reg3;

set sasintro.dakota15reg2;

GRASCROP=.;

if GCROP=1 then GRASCROP=1;

proc print data=sasintro.dakota15reg3;run;\*/

/\*data sasintro.dakota15reg1;

set sasintro.dakota15clean;

if (Q9aYN=1) or (Q9bYN=1) or (Q9CYN=1) then GRASCROP=0;

if (Q9aYN=2) or (Q9bYN=2) or (Q9CYN=2) then GRASCROP=1;

if (Q9cYN=1) or (Q9dYN=1) or (Q9eYN=1) then CRPUSE=0;

if (Q9cYN=2) or (Q9dYN=2) or (Q9eYN=2) then CRPUSE=1;

RUN;

proc print data=sasintro.dakota15reg1;run; \*/

/\* cross tab chi square test, Q9 part one GRASCROP region and state based, 19, 20, 21, 22, 23, \*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15reg1;

label Q9AYN='Conversion of native grassland to cropland'

Q9BYN='Conversion of tame grassland to cropland'

Q9CYN='Conversion of CRP land to cropland'

GRASCROP='grass/CRP conversion to cropland decison:';

tables (Q9AYN Q9BYN Q9CYN)\* GRASCROP/chisq;

format Q9aYN Response. Q9bYN Response. Q9cYN Response. ;

run;

proc freq data=sasintro.dakota15reg1;

label Q9CYN='Conversion of CRP land to cropland'

Q9DYN='Conversion of CRP land to pasture/hay'

Q9EYN='Enrollment of farm acres into CRP'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables (Q9CYN Q9DYN Q9EYN)\* CRPUSE/chisq;

format Q9CYN Response. Q9DYN Response. Q9EYN Response. ;

run;

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc freq data=sasintro.dakota15reg1;

label Q19='Respondent Age'

GRASCROP='grass/CRP conversion to cropland decison:';

tables GRASCROP\*Q19/chisq;

format Q19 Age. ;

run;

proc freq data=sasintro.dakota15reg1;

label Q20='Respondent Gender'

GRASCROP='grass/CRP conversion to cropland decison:';

tables GRASCROP\*Q20/chisq;

format Q20 Gender. ;

run;

proc freq data=sasintro.dakota15reg1;

label Q21='Respondent Level of Education'

GRASCROP='grass/CRP conversion to cropland decison:';

tables GRASCROP\*Q21/chisq;

format Q21 Education. ;

run;

proc freq data=sasintro.dakota15reg1;

label Q22='Principal Occupation'

GRASCROP='grass/CRP conversion to cropland decison:';

tables GRASCROP\*Q22/chisq;

format Q22 Occupation. ;

run;

proc freq data=sasintro.dakota15reg1;

label Q23= 'Gross farm/ranch sales'

GRASCROP='grass/CRP conversion to cropland decison:';

tables GRASCROP\*Q23/chisq;

format Q23 Sales. ;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator';

run;

proc freq data=sasintro.dakota15reg1;

label Q1= 'Year As a Farm Operator'

GRASCROP='grass/CRP conversion to cropland decison:';

tables GRASCROP\*Q1/chisq;

format Q1 Operation. ;

run;

proc format;

value Farmland 10-259='10 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg1;

label Q3A= 'Farmland Acres Operated in 2014'

GRASCROP='grass/CRP conversion to cropland decison:';

tables GRASCROP\*Q3A/chisq;

format Q3A Farmland.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15reg1;

label Q4= 'Best Ownership Status in 2014'

GRASCROP='grass/CRP conversion to cropland decison:';

tables GRASCROP\*Q4/chisq;

format Q4 Ownership. GRASCROP Reresponse.;

run;

proc freq data=sasintro.dakota15reg1;

label

GRASCROP='grass/CRP conversion to cropland decison:';

table GRASCROP\*State/chisq;

run;

proc freq data=sasintro.dakota15reg1;

label GRASCROP='grass/CRP conversion to cropland decison:';

table GRASCROP\*Region/chisq;

run;

/\*cross tab chi square test, Q9 part one CRPUSE

AND region and state based, 19, 20, 21, 22, 23, \*/

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc freq data=sasintro.dakota15reg1;

label Q19='Respondent Age'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q19/chisq;

format Q19 Age. ;

run;

proc freq data=sasintro.dakota15reg1;

label Q20='Respondent Gender'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q20/chisq;

format Q20 Gender. ;

run;

proc freq data=sasintro.dakota15reg1;

label Q21='Respondent Level of Education'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q21/chisq;

format Q21 Education. ;

run;

proc freq data=sasintro.dakota15reg1;

label Q22='Principal Occupation'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q22/chisq;

format Q22 Occupation.;

run;

proc freq data=sasintro.dakota15reg1;

label Q23= 'Gross farm/ranch sales'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q23/chisq;

format Q23 Sales.;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator';

run;

proc freq data=sasintro.dakota15reg1;

label Q1= 'Year As a Farm Operator'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q1/chisq;

format Q1 Operation.;

run;

proc format;

value Farmland 10-259='10 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg1;

label Q3A= 'Farmland Acres Operated in 2014'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q3A/chisq;

format Q3A Farmland. ;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15reg1;

label Q4= 'Best Ownership Status in 2014'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q4/chisq;

format Q4 Ownership.;

run;

proc freq data=sasintro.dakota15reg1;

label

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

table CRPUSE\*State/chisq;

run;

proc freq data=sasintro.dakota15reg1;

label CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

table CRPUSE\*Region/chisq;

run;

proc format;

value CRPLand 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg1;

label Q3C= 'CRP acres in 2014'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q3C/chisq;

format Q3C CRPLand.;

run;

/\* depending on your findingsrelated to (2) on farm-related issues afftecting

their own decisons, we may further investigating the farm related issues

(Q15a and 15b) that impact changes in their local area. \*/

/\*\* question 15a \*\*/

proc format;

value Areaimpact

0='Not applicable (No change)'

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15reg1;

label

Q15a1='Changing crop prices'

Q15a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q15a3='Availability of crop and revenue insurance policies'

Q15a4='Availability of drought-tolerant seed'

Q15a5='Developments in pest management practices, including pest management seed traits'

Q15a6='Improved crop yields (other than seed related traits)'

Q15a7='Development of more efficient cropping equipment'

Q15a8='Labor availability problems'

Q15a9='Improving wildlife habitat'

Q15a10='Changing weather /climate patterns';

tables(Q15a1 Q15a2 Q15a3 Q15a4 Q15a5 Q15a6 Q15a7 Q15a8 Q15a9 Q15a10)\*State/chisq;

format Q15a1 Areaimpact. Q15a2 Areaimpact. Q15a3 Areaimpact. Q15a4 Areaimpact. Q15a5 Areaimpact.

Q15a6 Areaimpact. Q15a7 Areaimpact. Q15a8 Areaimpact. Q15a9 Areaimpact. Q15a10 Areaimpact.;

run;

proc format;

value Areaimpact

0='Not applicable (No change)'

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15reg1;

label

Q15a1='Changing crop prices'

Q15a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q15a3='Availability of crop and revenue insurance policies'

Q15a4='Availability of drought-tolerant seed'

Q15a5='Developments in pest management practices, including pest management seed traits'

Q15a6='Improved crop yields (other than seed related traits)'

Q15a7='Development of more efficient cropping equipment'

Q15a8='Labor availability problems'

Q15a9='Improving wildlife habitat'

Q15a10='Changing weather /climate patterns';

tables(Q15a1 Q15a2 Q15a3 Q15a4 Q15a5 Q15a6 Q15a7 Q15a8 Q15a9 Q15a10)\*Region/chisq;

format Q15a1 Areaimpact. Q15a2 Areaimpact. Q15a3 Areaimpact. Q15a4 Areaimpact. Q15a5 Areaimpact.

Q15a6 Areaimpact. Q15a7 Areaimpact. Q15a8 Areaimpact. Q15a9 Areaimpact. Q15a10 Areaimpact.;

run;

\*question 15b;

proc format;

value State

1001-2182,9002='North Dakota'

2183-4000,9001='South Dakota';

value biggestimpact

0 = 'No applicable (No change)'

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

run;

proc freq data=sasintro.dakota15reg1;

label

Q15b='Which one issue had the greatest impact on changes in land use in your local area?';

tables Q15b\*State/Chisq;

format Q15b biggestimpact.;

run;

proc format;

value State

1001-2182,9002='North Dakota'

2183-4000,9001='South Dakota';

value biggestimpact

0 = 'No applicable (No change)'

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

run;

proc freq data=sasintro.dakota15reg1;

label

Q15b='Which one issue had the greatest impact on changes in land use in your local area?';

tables Q15b\*Region/Chisq;

format Q15b biggestimpact.;

run;

/\* 15a iteam and operators characteristcs \*/

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over'

value Gender

1='Male'

2='Female'

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)'

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired'

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc format;

value Areaimpact

0='Not applicable (No change)'

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15reg1;

label Q19='Respondent Age'

Q15a1='Changing crop prices'

Q15a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q15a3='Availability of crop and revenue insurance policies'

Q15a4='Availability of drought-tolerant seed'

Q15a5='Developments in pest management practices, including pest management seed traits'

Q15a6='Improved crop yields (other than seed related traits)'

Q15a7='Development of more efficient cropping equipment'

Q15a8='Labor availability problems'

Q15a9='Improving wildlife habitat'

Q15a10='Changing weather /climate patterns';

tables (Q15a1 Q15a2 Q15a3 Q15a4 Q15a5 Q15a6 Q15a7 Q15a8 Q15a9 Q15a10)\*Q19/chisq;

format Q19 Age. Q15a1 Areaimpact. Q15a2 Areaimpact. Q15a3 Areaimpact. Q15a4 Areaimpact. Q15a5 Areaimpact.

Q15a6 Areaimpact. Q15a7 Areaimpact. Q15a8 Areaimpact. Q15a9 Areaimpact. Q15a10 Areaimpact.;;

run;

proc freq data=sasintro.dakota15reg1;

label Q20='Respondent Gender'

Q15a1='Changing crop prices'

Q15a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q15a3='Availability of crop and revenue insurance policies'

Q15a4='Availability of drought-tolerant seed'

Q15a5='Developments in pest management practices, including pest management seed traits'

Q15a6='Improved crop yields (other than seed related traits)'

Q15a7='Development of more efficient cropping equipment'

Q15a8='Labor availability problems'

Q15a9='Improving wildlife habitat'

Q15a10='Changing weather /climate patterns';

tables (Q15a1 Q15a2 Q15a3 Q15a4 Q15a5 Q15a6 Q15a7 Q15a8 Q15a9 Q15a10)\*Q20/chisq;

format Q20 Gender. Q15a1 Areaimpact. Q15a2 Areaimpact. Q15a3 Areaimpact.

Q15a4 Areaimpact. Q15a5 Areaimpact. Q15a6 Areaimpact. Q15a7 Areaimpact.

Q15a8 Areaimpact. Q15a9 Areaimpact. Q15a10 Areaimpact.;

run;

proc freq data=sasintro.dakota15reg1;

label Q21='Respondent Level of Education'

Q15a1='Changing crop prices'

Q15a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q15a3='Availability of crop and revenue insurance policies'

Q15a4='Availability of drought-tolerant seed'

Q15a5='Developments in pest management practices, including pest management seed traits'

Q15a6='Improved crop yields (other than seed related traits)'

Q15a7='Development of more efficient cropping equipment'

Q15a8='Labor availability problems'

Q15a9='Improving wildlife habitat'

Q15a10='Changing weather /climate patterns';

tables (Q15a1 Q15a2 Q15a3 Q15a4 Q15a5 Q15a6 Q15a7 Q15a8 Q15a9 Q15a10)\*Q21/chisq;

format Q21 Education. Q15a1 Areaimpact. Q15a2 Areaimpact. Q15a3 Areaimpact.

Q15a4 Areaimpact. Q15a5 Areaimpact. Q15a6 Areaimpact. Q15a7 Areaimpact.

Q15a8 Areaimpact. Q15a9 Areaimpact. Q15a10 Areaimpact.;

run;

proc freq data=sasintro.dakota15reg1;

label Q22='Principal Occupation'

Q15a1='Changing crop prices'

Q15a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q15a3='Availability of crop and revenue insurance policies'

Q15a4='Availability of drought-tolerant seed'

Q15a5='Developments in pest management practices, including pest management seed traits'

Q15a6='Improved crop yields (other than seed related traits)'

Q15a7='Development of more efficient cropping equipment'

Q15a8='Labor availability problems'

Q15a9='Improving wildlife habitat'

Q15a10='Changing weather /climate patterns';

tables (Q15a1 Q15a2 Q15a3 Q15a4 Q15a5 Q15a6 Q15a7 Q15a8 Q15a9 Q15a10)\*Q22/chisq;

format Q22 Occupation. Q15a1 Areaimpact. Q15a2 Areaimpact. Q15a3 Areaimpact.

Q15a4 Areaimpact. Q15a5 Areaimpact. Q15a6 Areaimpact. Q15a7 Areaimpact.

Q15a8 Areaimpact. Q15a9 Areaimpact. Q15a10 Areaimpact.;

run;

proc freq data=sasintro.dakota15reg1;

label Q23='Gross farm/ranch sales'

Q15a1='Changing crop prices'

Q15a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q15a3='Availability of crop and revenue insurance policies'

Q15a4='Availability of drought-tolerant seed'

Q15a5='Developments in pest management practices, including pest management seed traits'

Q15a6='Improved crop yields (other than seed related traits)'

Q15a7='Development of more efficient cropping equipment'

Q15a8='Labor availability problems'

Q15a9='Improving wildlife habitat'

Q15a10='Changing weather /climate patterns';

tables (Q15a1 Q15a2 Q15a3 Q15a4 Q15a5 Q15a6 Q15a7 Q15a8 Q15a9 Q15a10)\*Q23/chisq;

format Q23 Sales. Q15a1 Areaimpact. Q15a2 Areaimpact. Q15a3 Areaimpact.

Q15a4 Areaimpact. Q15a5 Areaimpact. Q15a6 Areaimpact. Q15a7 Areaimpact.

Q15a8 Areaimpact. Q15a9 Areaimpact. Q15a10 Areaimpact.;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator'

;

run;

proc freq data=sasintro.dakota15reg1;

label Q1='Years as a farm operator'

Q15a1='Changing crop prices'

Q15a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q15a3='Availability of crop and revenue insurance policies'

Q15a4='Availability of drought-tolerant seed'

Q15a5='Developments in pest management practices, including pest management seed traits'

Q15a6='Improved crop yields (other than seed related traits)'

Q15a7='Development of more efficient cropping equipment'

Q15a8='Labor availability problems'

Q15a9='Improving wildlife habitat'

Q15a10='Changing weather /climate patterns';

tables (Q15a1 Q15a2 Q15a3 Q15a4 Q15a5 Q15a6 Q15a7 Q15a8 Q15a9 Q15a10)\*Q1/chisq;

format Q1 Operation. Q15a1 Areaimpact. Q15a2 Areaimpact. Q15a3 Areaimpact.

Q15a4 Areaimpact. Q15a5 Areaimpact. Q15a6 Areaimpact. Q15a7 Areaimpact.

Q15a8 Areaimpact. Q15a9 Areaimpact. Q15a10 Areaimpact.;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg1;

label Q3A='Farmland Acres Operated in 2014'

Q15a1='Changing crop prices'

Q15a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q15a3='Availability of crop and revenue insurance policies'

Q15a4='Availability of drought-tolerant seed'

Q15a5='Developments in pest management practices, including pest management seed traits'

Q15a6='Improved crop yields (other than seed related traits)'

Q15a7='Development of more efficient cropping equipment'

Q15a8='Labor availability problems'

Q15a9='Improving wildlife habitat'

Q15a10='Changing weather /climate patterns';

tables (Q15a1 Q15a2 Q15a3 Q15a4 Q15a5 Q15a6 Q15a7 Q15a8 Q15a9 Q15a10)\*Q3A/chisq;

format Q3A Farmland. Q15a1 Areaimpact. Q15a2 Areaimpact. Q15a3 Areaimpact.

Q15a4 Areaimpact. Q15a5 Areaimpact. Q15a6 Areaimpact. Q15a7 Areaimpact.

Q15a8 Areaimpact. Q15a9 Areaimpact. Q15a10 Areaimpact.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15reg1;

label Q4='Ownership Status in 2014'

Q15a1='Changing crop prices'

Q15a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q15a3='Availability of crop and revenue insurance policies'

Q15a4='Availability of drought-tolerant seed'

Q15a5='Developments in pest management practices, including pest management seed traits'

Q15a6='Improved crop yields (other than seed related traits)'

Q15a7='Development of more efficient cropping equipment'

Q15a8='Labor availability problems'

Q15a9='Improving wildlife habitat'

Q15a10='Changing weather /climate patterns';

tables (Q15a1 Q15a2 Q15a3 Q15a4 Q15a5 Q15a6 Q15a7 Q15a8 Q15a9 Q15a10)\*Q4/chisq;

format Q4 Ownership. Q15a1 Areaimpact. Q15a2 Areaimpact. Q15a3 Areaimpact.

Q15a4 Areaimpact. Q15a5 Areaimpact. Q15a6 Areaimpact. Q15a7 Areaimpact.

Q15a8 Areaimpact. Q15a9 Areaimpact. Q15a10 Areaimpact.;

run;

proc format;

value CRPLand 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg1;

label Q3C='CRP acres in 2014'

Q15a1='Changing crop prices'

Q15a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q15a3='Availability of crop and revenue insurance policies'

Q15a4='Availability of drought-tolerant seed'

Q15a5='Developments in pest management practices, including pest management seed traits'

Q15a6='Improved crop yields (other than seed related traits)'

Q15a7='Development of more efficient cropping equipment'

Q15a8='Labor availability problems'

Q15a9='Improving wildlife habitat'

Q15a10='Changing weather /climate patterns';

tables (Q15a1 Q15a2 Q15a3 Q15a4 Q15a5 Q15a6 Q15a7 Q15a8 Q15a9 Q15a10)\*Q3c/chisq;

format Q3c CRPLand. Q15a1 Areaimpact. Q15a2 Areaimpact. Q15a3 Areaimpact.

Q15a4 Areaimpact. Q15a5 Areaimpact. Q15a6 Areaimpact. Q15a7 Areaimpact.

Q15a8 Areaimpact. Q15a9 Areaimpact. Q15a10 Areaimpact.;

run;

/\* 15A CHEC, STATE VS REGION and operator characteristics\*/

Proc format;

value Chec

0='no changes in Ag-land use in my area over the past 10 years'

1='there have been changes in Ag-land use in my area over the past 10 years';

run;

proc freq data=sasintro.dakota15reg1;

label

Q15aChec='Check the box if there have been no changes in agricultural land use in your area during the past 10 years';

tables (Q15aChec)\*STATE/chisq;

format Q15aChec Chec.;

run;

Proc format;

value Chec

0='no changes in Ag-land use in my area over the past 10 years'

1='there have been changes in Ag-land use in my area over the past 10 years';

run;

proc freq data=sasintro.dakota15reg1;

label

Q15aChec='Check the box if there have been no changes in agricultural land use in your area during the past 10 years';

tables (Q15aChec)\*Region/chisq;

format Q15aChec Chec.;

run;

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over'

value Gender

1='Male'

2='Female'

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)'

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired'

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc freq data=sasintro.dakota15reg1;

label Q19='Respondent Age'

Q15aChec='Check the box if there have been no changes in agricultural land use in your area during the past 10 years';

tables Q15ACHEC\*Q19/chisq;

format Q19 Age. Q15achec chec.;

run;

proc freq data=sasintro.dakota15reg1;

label Q20='Respondent Genger'

Q15aChec='Check the box if there have been no changes in agricultural land use in your area during the past 10 years';

tables Q15ACHEC\*Q20/chisq;

format Q20 Gender. Q15achec chec.;

run;

proc freq data=sasintro.dakota15reg1;

label Q21='Respondent Level of Education'

Q15aChec='Check the box if there have been no changes in agricultural land use in your area during the past 10 years';

tables Q15ACHEC\*Q21/chisq;

format Q21 Education. Q15achec chec.;

run;

proc freq data=sasintro.dakota15reg1;

label Q22='Principal Occupation'

Q15aChec='Check the box if there have been no changes in agricultural land use in your area during the past 10 years';

tables Q15ACHEC\*Q22/chisq;

format Q22 Occupation. Q15achec chec.;

run;

proc freq data=sasintro.dakota15reg1;

label Q23='Gross farm/ranch Sales'

Q15aChec='Check the box if there have been no changes in agricultural land use in your area during the past 10 years';

tables Q15ACHEC\*Q23/chisq;

format Q23 Sales. Q15achec chec.;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator';

run;

proc freq data=sasintro.dakota15reg1;

label Q1='Principal Occupation'

Q15aChec='Check the box if there have been no changes in agricultural land use in your area during the past 10 years';

tables Q15ACHEC\*Q1/chisq;

format Q1 Operation. Q15achec chec.;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg1;

label Q3a='Farmland acres operated in 2014'

Q15aChec='Check the box if there have been no changes in agricultural land use in your area during the past 10 years';

tables Q15ACHEC\*Q3a/chisq;

format Q3a Farmland. Q15achec chec.;

run;

proc format;

value CRPLand 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg1;

label Q3c='CRP acres in 2014'

Q15aChec='Check the box if there have been no changes in agricultural land use in your area during the past 10 years';

tables Q15ACHEC\*Q3c/chisq;

format Q3c CRPLand. Q15achec chec.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15reg1;

label Q4='Ownership Status in 2014'

Q15aChec='Check the box if there have been no changes in agricultural land use in your area during the past 10 years';

tables Q15ACHEC\*Q4/chisq;

format Q4 Ownership. Q15achec chec.;

run;

/

/\*I want to sum of acres converted to cropland for any reason, create new variable\*/

data sasintro.dakota15reg11;

set sasintro.dakota15reg1;

CONVERT=.;

CONVERT=(Q9AAC+Q9BAC+Q9CAC);

RUN;

proc print data=sasintro.dakota15reg11;run;

/\*I want to sum of acres converted to cropland for any reason, create new variable end\*/

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class state;

var CONVERT;

label CONVERT='Sum of Acres Converted';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class Region;

var CONVERT;

label CONVERT='Sum of Acres Converted';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class GRASCROP;

var CONVERT;

label CONVERT='Sum of Acres Converted';

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class Q3A;

var CONVERT;

label CONVERT='Sum of Acres Converted'

Q3A ='Farmland acres operated in 2014';

format Q3A Farmland.;

run;

proc format;

value Cropland 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class Q3B;

var CONVERT;

label CONVERT='Sum of Acres Converted'

Q3B ='Cropland acres operated in 2014';

format Q3B Cropland.;

run;

proc format;

value CRPLand 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class Q3C;

var CONVERT;

label CONVERT='Sum of Acres Converted'

Q3C ='CRP acres in 2014';

format Q3C CRPLand.;

run;

proc format;

value Cornacresnew 0='0 acres'

1-99 = '1 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-499 ='220 to 499 acres'

500-high ='500 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class Q6CornA;

var CONVERT;

label CONVERT='Sum of Acres Converted'

Q6CornA ='Corn acres harvested on non irrigated land';

format Q6CornA Cornacresnew.;

run;

proc format;

value Soyacres 0='0 acres'

1-99 = '1 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-499 ='220 to 499 acres'

500-high ='500 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class Q6SoyA;

var CONVERT;

label CONVERT='Sum of Acres Converted'

Q6SoyA ='Soybeans acres harvested on non irrigated land';

format Q6SoyA Soyacres.;

run;

proc format;

value Wheatacres 0='0 acres'

1-99 = '1 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-499 ='220 to 499 acres'

500-high ='500 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class Q6WhA;

var CONVERT;

label CONVERT='Sum of Acres Converted'

Q6WhA ='Wheat acres harvested on non irrigated land';

format Q6WhA Wheatacres.;

run;

proc format;

value Alfalfaacres 0='0 acres'

1-99 = '1 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-499 ='220 to 499 acres'

500-high ='500 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class Q6AlfA;

var CONVERT;

label CONVERT='Sum of Acres Converted'

Q6AlfA ='Alfalfa acres harvested on non irrigated land';

format Q6AlfA Alfalfaacres.;

run;

proc format;

value Wheatacresnew 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class WHTACRE;

var CONVERT;

label CONVERT='Sum of Acres Converted'

WHTACRE ='Wheat acres';

format WHTACRE Wheatacresnew.;

run;

proc format;

value Cornacreslatest 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class CORNACRE;

var CONVERT;

label CONVERT='Sum of Acres Converted'

CORNACRE ='CORN acres';

format CORNACRE Cornacreslatest.;

run;

proc format;

value Soybacresnew 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class SOYBACRE;

var CONVERT;

label CONVERT='Sum of Acres Converted'

SOYBACRE ='SOYBEAN acres';

format SOYBACRE Soybacresnew.;

run;

proc format;

value Hayacresnew 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class HAYACRE;

var CONVERT;

label CONVERT='Sum of Acres Converted'

HAYACRE ='HAY acres';

format HAYACRE Hayacresnew.;

run;

proc format;

value Plntacresnew 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class PLNTACRE;

var CONVERT;

label CONVERT='Sum of Acres Converted'

PLNTACRE ='PLANTED acres';

format PLNTACRE Plntacresnew.;

run;

proc format;

value Beefherdnew 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class BEEFHERD;

var CONVERT;

label CONVERT='Sum of Acres Converted'

BEEFHERD ='BEEF HERD';

format BEEFHERD Beefherdnew.;

run;

/\* summary statistis question 9 part 2 related\*/

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class State;

var CONVERT Q9AAC Q9BAC Q9CAC;

label CONVERT='Sum of Acres Converted'

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class REGION;

var CONVERT Q9AAC Q9BAC Q9CAC;

label CONVERT='Sum of Acres Converted'

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class GRASCROP;

var CONVERT Q9AAC Q9BAC Q9CAC;

label CONVERT='Sum of Acres Converted'

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland';

run;

/\* sumamry statistics QUESTION 3 REALTED ANALYSIS\*/

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class state;

var Q3a Q3b Q3c Q3d;

label

Q3a ='Total Farmland acres operated in 2014'

Q3b ='Cropland (excluding CRP) acres'

Q3c ='CRP acres in 2014'

Q3d ='Pasture/Rangeland acres';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class Region;

var Q3a Q3b Q3c Q3d;

label

Q3a ='Total Farmland acres operated in 2014'

Q3b ='Cropland (excluding CRP) acres'

Q3c ='CRP acres in 2014'

Q3d ='Pasture/Rangeland acres';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class GRASCROP;

var Q3a Q3b Q3c Q3d;

label

Q3a ='Total Farmland acres operated in 2014'

Q3b ='Cropland (excluding CRP) acres'

Q3c ='CRP acres in 2014'

Q3d ='Pasture/Rangeland acres';

run;

/\*summary Statistics Question 6 related \*/

proc means data=sasintro.dakota15reg11 nn nmiss sum min max mean CV std STDERR maxdec=2;

class State;

var Q6cornA Q6soyA Q6WhA Q6AlfA;

label

Q6cornA='Corn Acres'

Q6soyA='Soybean Acres'

Q6WhA='Wheat Acres'

Q6AlfA='Alfalfa Acres';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class Region;

var Q6cornA Q6soyA Q6WhA Q6AlfA;

label

Q6cornA='Corn Acres'

Q6soyA='Soybean Acres'

Q6WhA='Wheat Acres'

Q6AlfA='Alfalfa Acres';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class GRASCROP;

var Q6cornA Q6soyA Q6WhA Q6AlfA;

label

Q6cornA='Corn Acres'

Q6soyA='Soybean Acres'

Q6WhA='Wheat Acres'

Q6AlfA='Alfalfa Acres';

run;

/\* summary statistics related to different acres\*/

proc means data=sasintro.dakota15reg11 nn nmiss sum min max mean CV std STDERR maxdec=2;

class State;

var WHTACRE CORNACRE SOYBACRE HAYACRE PLNTACRE BEEFHERD ;

label

WHTACRE='WHEAT Acres'

CORNACRE='CORN Acres'

SOYBACRE='SOYBEAN Acres'

HAYACRE='HAY Acres'

PLNTACRE='PLANTED ACRES'

BEEFHERD='BEEF HERD';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class Region;

var WHTACRE CORNACRE SOYBACRE HAYACRE PLNTACRE BEEFHERD ;

label

WHTACRE='WHEAT Acres'

CORNACRE='CORN Acres'

SOYBACRE='SOYBEAN Acres'

HAYACRE='HAY Acres'

PLNTACRE='PLANTED ACRES'

BEEFHERD='BEEF HERD';

run;

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class GRASCROP;

var WHTACRE CORNACRE SOYBACRE HAYACRE PLNTACRE BEEFHERD ;

label

WHTACRE='WHEAT Acres'

CORNACRE='CORN Acres'

SOYBACRE='SOYBEAN Acres'

HAYACRE='HAY Acres'

PLNTACRE='PLANTED ACRES'

BEEFHERD='BEEF HERD';

run;

/\* Q14a realated analysis based on state operator characteristics by chisq\*/

Proc format;

value Pastchange

1='Decreased Markedly (over 10%)'

2='Decreased Somewhat (5-10%)'

3='Stayed about the same (less than 5%)'

4='Increased Somewhat (5-10%)'

5='Increased Markedly (over 10%)';

run;

proc freq data=sasintro.dakota15reg11;

label

Q14a1='Grassland acres, any type'

Q14a2='Native Grassland acres only'

Q14a3='Soybean or Corn acres';

tables (Q14a1 Q14a2 Q14a3)\*State/chisq;

format Q14a1 Pastchange. Q14a2 Pastchange. Q14a3 Pastchange.;

run;

proc freq data=sasintro.dakota15reg11;

label

Q14a1='Grassland acres, any type'

Q14a2='Native Grassland acres only'

Q14a3='Soybean or Corn acres';

tables (Q14a1 Q14a2 Q14a3)\*Region/chisq;

format Q14a1 Pastchange. Q14a2 Pastchange. Q14a3 Pastchange.;

run;

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc freq data=sasintro.dakota15reg11;

label Q19='Respondent Age'

Q14a1='Grassland acres, any type'

Q14a2='Native Grassland acres only'

Q14a3='Soybean or Corn acres';

tables (Q14a1 Q14a2 Q14a3)\*Q19/chisq;

format Q19 Age. Q14a1 Pastchange. Q14a2 Pastchange. Q14a3 Pastchange.;

run;

proc freq data=sasintro.dakota15reg11;

label Q20='Respondent Genger'

Q14a1='Grassland acres, any type'

Q14a2='Native Grassland acres only'

Q14a3='Soybean or Corn acres';

tables (Q14a1 Q14a2 Q14a3)\*Q20/chisq;

format Q20 Gender. Q14a1 Pastchange. Q14a2 Pastchange. Q14a3 Pastchange.;

run;

proc freq data=sasintro.dakota15reg11;

label Q21='Respondent Level of Education'

Q14a1='Grassland acres, any type'

Q14a2='Native Grassland acres only'

Q14a3='Soybean or Corn acres';

tables (Q14a1 Q14a2 Q14a3)\*Q21/chisq;

format Q21 Education. Q14a1 Pastchange. Q14a2 Pastchange. Q14a3 Pastchange.;

run;

proc freq data=sasintro.dakota15reg11;

label Q22='Principal Occupation'

Q14a1='Grassland acres, any type'

Q14a2='Native Grassland acres only'

Q14a3='Soybean or Corn acres';

tables (Q14a1 Q14a2 Q14a3)\*Q22/chisq;

format Q22 Occupation. Q14a1 Pastchange. Q14a2 Pastchange. Q14a3 Pastchange.;

run;

proc freq data=sasintro.dakota15reg11;

label Q23='Gross farm/ranch Sales'

Q14a1='Grassland acres, any type'

Q14a2='Native Grassland acres only'

Q14a3='Soybean or Corn acres';

tables (Q14a1 Q14a2 Q14a3)\*Q23/chisq;

format Q23 Sales. Q14a1 Pastchange. Q14a2 Pastchange. Q14a3 Pastchange.;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator';

run;

proc freq data=sasintro.dakota15reg11;

label Q1='Principal Occupation'

Q14a1='Grassland acres, any type'

Q14a2='Native Grassland acres only'

Q14a3='Soybean or Corn acres';

tables (Q14a1 Q14a2 Q14a3)\*Q1/chisq;

format Q1 Operation. Q14a1 Pastchange. Q14a2 Pastchange. Q14a3 Pastchange.;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg11;

label Q3a='Farmland acres operated in 2014'

Q14a1='Grassland acres, any type'

Q14a2='Native Grassland acres only'

Q14a3='Soybean or Corn acres';

tables (Q14a1 Q14a2 Q14a3)\*Q3a/chisq;

format Q3a Farmland. Q14a1 Pastchange. Q14a2 Pastchange. Q14a3 Pastchange.;

run;

proc format;

value CRPLand 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg11;

label Q3c='CRP acres in 2014'

Q14a1='Grassland acres, any type'

Q14a2='Native Grassland acres only'

Q14a3='Soybean or Corn acres';

tables (Q14a1 Q14a2 Q14a3)\*Q3c/chisq;

format Q3c CRPLand. Q14a1 Pastchange. Q14a2 Pastchange. Q14a3 Pastchange.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15reg11;

label Q4='Ownership Status in 2014'

Q14a1='Grassland acres, any type'

Q14a2='Native Grassland acres only'

Q14a3='Soybean or Corn acres';

tables (Q14a1 Q14a2 Q14a3)\*Q4/chisq;

format Q4 Ownersip. Q14a1 Pastchange. Q14a2 Pastchange. Q14a3 Pastchange.;

run;

/\* Q14b realated analysis based on state operator characteristics by chisq\*/

Proc format;

value Futurechange

1='Decrease Markedly (over 10%)'

2='Decrease Somewhat (5-10%)'

3='Stayed about the same (less than 5%)'

4='Increase Somewhat (5-10%)'

5='Increase Markedly (over 10%)';

run;

proc freq data=sasintro.dakota15reg11;

label

Q14b1='Grassland acres, any type'

Q14b2='Native Grassland acres only'

Q14b3='Soybean or Corn acres';

tables (Q14b1 Q14b2 Q14b3)\*State/chisq;

format Q14b1 Futurechange. Q14b2 Futurechange. Q14b3 Futurechange.;

run;

proc freq data=sasintro.dakota15reg11;

label

Q14b1='Grassland acres, any type'

Q14b2='Native Grassland acres only'

Q14b3='Soybean or Corn acres';

tables (Q14b1 Q14b2 Q14b3)\*Region/chisq;

format Q14b1 Futurechange. Q14b2 Futurechange. Q14b3 Futurechange.;

run;

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired'

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc freq data=sasintro.dakota15reg11;

label Q19='Respondent Age'

Q14b1='Grassland acres, any type'

Q14b2='Native Grassland acres only'

Q14b3='Soybean or Corn acres';

tables (Q14b1 Q14b2 Q14b3)\*Q19/chisq;

format Q19 Age. Q14b1 Futurechange. Q14b2 Futurechange. Q14b3 Futurechange.;

run;

proc freq data=sasintro.dakota15reg11;

label Q20='Respondent Genger'

Q14b1='Grassland acres, any type'

Q14b2='Native Grassland acres only'

Q14b3='Soybean or Corn acres';

tables (Q14b1 Q14b2 Q14b3)\*Q20/chisq;

format Q20 Gender. Q14b1 Futurechange. Q14b2 Futurechange. Q14b3 Futurechange.;

run;

proc freq data=sasintro.dakota15reg11;

label Q21='Respondent Level of Education'

Q14b1='Grassland acres, any type'

Q14b2='Native Grassland acres only'

Q14b3='Soybean or Corn acres';

tables (Q14b1 Q14b2 Q14b3)\*Q21/chisq;

format Q21 Education. Q14b1 Futurechange. Q14b2 Futurechange. Q14b3 Futurechange.;

run;

proc freq data=sasintro.dakota15reg11;

label Q22='Principal Occupation'

Q14b1='Grassland acres, any type'

Q14b2='Native Grassland acres only'

Q14b3='Soybean or Corn acres';

tables (Q14b1 Q14b2 Q14b3)\*Q22/chisq;

format Q22 Occupation. Q14b1 Futurechange. Q14b2 Futurechange. Q14b3 Futurechange.;

run;

proc freq data=sasintro.dakota15reg11;

label Q23='Gross farm/ranch Sales'

Q14b1='Grassland acres, any type'

Q14b2='Native Grassland acres only'

Q14b3='Soybean or Corn acres';

tables (Q14b1 Q14b2 Q14b3)\*Q23/chisq;

format Q23 Sales. Q14b1 Futurechange. Q14b2 Futurechange. Q14b3 Futurechange.;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator';

run;

proc freq data=sasintro.dakota15reg11;

label Q1='Principal Occupation'

Q14b1='Grassland acres, any type'

Q14b2='Native Grassland acres only'

Q14b3='Soybean or Corn acres';

tables (Q14b1 Q14b2 Q14b3)\*Q1/chisq;

format Q1 Operation. Q14b1 Futurechange. Q14b2 Futurechange. Q14b3 Futurechange.;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg11;

label Q3a='Farmland acres operated in 2014'

Q14b1='Grassland acres, any type'

Q14b2='Native Grassland acres only'

Q14b3='Soybean or Corn acres';

tables (Q14b1 Q14b2 Q14b3)\*Q3a/chisq;

format Q3a farmland. Q14b1 Futurechange. Q14b2 Futurechange. Q14b3 Futurechange.;

run;

proc format;

value CRPLand 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg11;

label Q3c='CRP acres in 2014'

Q14b1='Grassland acres, any type'

Q14b2='Native Grassland acres only'

Q14b3='Soybean or Corn acres';

tables (Q14b1 Q14b2 Q14b3)\*Q3c/chisq;

format Q3c CRPLand. Q14b1 Futurechange. Q14b2 Futurechange. Q14b3 Futurechange.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15reg11;

label Q4='Ownership Status in 2014'

Q14b1='Grassland acres, any type'

Q14b2='Native Grassland acres only'

Q14b3='Soybean or Corn acres';

tables (Q14b1 Q14b2 Q14b3)\*Q4/chisq;

format Q4 Ownership. Q14b1 Futurechange. Q14b2 Futurechange. Q14b3 Futurechange.;

run;

/\* friday august 18 , 2015 CRP Use related analysis and also for CRPUSE \*/

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class CRPUSE;

var CONVERT;

label CONVERT='Sum of Acres Converted';

run;

/\* summary statistis question 9 part 2 related\*/

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class CRPUSE;

var CONVERT Q9AAC Q9BAC Q9CAC;

label CONVERT='Sum of Acres Converted'

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland';

run;

/\* sumamry statistics QUESTION 3 REALTED ANALYSIS\*/

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class CRPUSE;

var Q3a Q3b Q3c Q3d;

label

Q3a ='Total Farmland acres operated in 2014'

Q3b ='Cropland (excluding CRP) acres'

Q3c ='CRP acres in 2014'

Q3d ='Pasture/Rangeland acres';

run;

/\*summary Statistics Question 6 related \*/

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class CRPUSE;

var Q6cornA Q6soyA Q6WhA Q6AlfA;

label

Q6cornA='Corn Acres'

Q6soyA='Soybean Acres'

Q6WhA='Wheat Acres'

Q6AlfA='Alfalfa Acres';

run;

/\* summary statistics related to different acres\*/

proc means data=sasintro.dakota15reg11 n nmiss sum min max mean CV std STDERR maxdec=2;

class CRPUSE;

var WHTACRE CORNACRE SOYBACRE HAYACRE PLNTACRE BEEFHERD ;

label

WHTACRE='WHEAT Acres'

CORNACRE='CORN Acres'

SOYBACRE='SOYBEAN Acres'

HAYACRE='HAY Acres'

PLNTACRE='PLANTED ACRES'

BEEFHERD='BEEF HERD';

run;

/\*Friday, 18th GRASCRP=1; , related analysis, add new variable\*/

data sasintro.dakota15reg111;

set sasintro.dakota15reg11;

GRASCROPNEW=1;

if (Q9aYN=1) or (Q9bYN=1) or (Q9CYN=1) then GRASCROPNEW=1;

if (Q9aYN=.) or (Q9bYN=.) or (Q9CYN=.) then GRASCROPNEW=.;

CRPUSENEW=1;

if (Q9cYN=1) or (Q9dYN=1) or (Q9eYN=1) then CRPUSENEW=1;

if (Q9cYN=.) or (Q9dYN=.) or (Q9eYN=.) then CRPUSENEW=.;

RUN;

proc print data=sasintro.dakota15reg111;run;

proc means data=sasintro.dakota15reg111 n nmiss sum min max mean CV std STDERR maxdec=2;

class GRASCROPNEW;

var CONVERT;

label CONVERT='Sum of Acres Converted';

run;

/\* summary statistis question 9 part 2 related\*/

proc means data=sasintro.dakota15reg111 n nmiss sum min max mean CV std STDERR maxdec=2;

class GRASCROPNEW;

var CONVERT Q9AAC Q9BAC Q9CAC;

label CONVERT='Sum of Acres Converted'

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland';

run;

/\* sumamry statistics QUESTION 3 REALTED ANALYSIS\*/

proc means data=sasintro.dakota15reg111 n nmiss sum min max mean CV std STDERR maxdec=2;

class GRASCROPNEW;

var Q3a Q3b Q3c Q3d;

label

Q3a ='Total Farmland acres operated in 2014'

Q3b ='Cropland (excluding CRP) acres'

Q3c ='CRP acres in 2014'

Q3d ='Pasture/Rangeland acres';

run;

/\*summary Statistics Question 6 related \*/

proc means data=sasintro.dakota15reg111 n nmiss sum min max mean CV std STDERR maxdec=2;

class GRASCROPNEW;

var Q6cornA Q6soyA Q6WhA Q6AlfA;

label

Q6cornA='Corn Acres'

Q6soyA='Soybean Acres'

Q6WhA='Wheat Acres'

Q6AlfA='Alfalfa Acres';

run;

/\* summary statistics related to different acres\*/

proc means data=sasintro.dakota15reg111 n nmiss sum min max mean CV std STDERR maxdec=2;

class GRASCROPNEW;

var WHTACRE CORNACRE SOYBACRE HAYACRE PLNTACRE BEEFHERD ;

label

WHTACRE='WHEAT Acres'

CORNACRE='CORN Acres'

SOYBACRE='SOYBEAN Acres'

HAYACRE='HAY Acres'

PLNTACRE='PLANTED ACRES'

BEEFHERD='BEEF HERD';

run;

/\*CRPUSENEW RELATED ANALYSIS\*/

proc means data=sasintro.dakota15reg111 n nmiss sum min max mean CV std STDERR maxdec=2;

class CRPUSENEW;

var CONVERT;

label CONVERT='Sum of Acres Converted';

run;

/\* summary statistis question 9 part 2 related\*/

proc means data=sasintro.dakota15reg111 n nmiss sum min max mean CV std STDERR maxdec=2;

class CRPUSENEW;

var CONVERT Q9AAC Q9BAC Q9CAC;

label CONVERT='Sum of Acres Converted'

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland';

run;

/\* sumamry statistics QUESTION 3 REALTED ANALYSIS\*/

proc means data=sasintro.dakota15reg111 n nmiss sum min max mean CV std STDERR maxdec=2;

class CRPUSENEW;

var Q3a Q3b Q3c Q3d;

label

Q3a ='Total Farmland acres operated in 2014'

Q3b ='Cropland (excluding CRP) acres'

Q3c ='CRP acres in 2014'

Q3d ='Pasture/Rangeland acres';

run;

/\*summary Statistics Question 6 related \*/

proc means data=sasintro.dakota15reg111 n nmiss sum min max mean CV std STDERR maxdec=2;

class CRPUSENEW;

var Q6cornA Q6soyA Q6WhA Q6AlfA;

label

Q6cornA='Corn Acres'

Q6soyA='Soybean Acres'

Q6WhA='Wheat Acres'

Q6AlfA='Alfalfa Acres';

run;

/\* summary statistics related to different acres\*/

proc means data=sasintro.dakota15reg111 n nmiss sum min max mean CV std STDERR maxdec=2;

class CRPUSENEW;

var WHTACRE CORNACRE SOYBACRE HAYACRE PLNTACRE BEEFHERD ;

label

WHTACRE='WHEAT Acres'

CORNACRE='CORN Acres'

SOYBACRE='SOYBEAN Acres'

HAYACRE='HAY Acres'

PLNTACRE='PLANTED ACRES'

BEEFHERD='BEEF HERD';

run;

/\*6 Moses did not examine anything about Question 18 on cropland Characteristics \*/

proc format;

value Percentage 0 = '0 percent'

1-25 = '1 to 25 percent'

26-49 ='26 to 49 percent'

50-75 ='50 to 75 percent'

76-100 ='70 to 99 acres';

run;

proc freq data=sasintro.dakota15reg1;

label

Q18A ='Highly erodable land'

Q18B='Heavy Soil'

Q18C='Slow draining soil(Perdominantly clay'

Q18D='Sandy Soil';

tables (Q18A Q18B Q18C Q18D)\*Region/chisq;

format Q18A Percentage. Q18B Percentage. Q18C Percentage. Q18D Percentage. ;

run;

proc freq data=sasintro.dakota15reg1;

label

Q18A ='Highly erodable land'

Q18B='Heavy Soil'

Q18C='Slow draining soil(Perdominantly clay'

Q18D='Sandy Soil';

tables (Q18A Q18B Q18C Q18D)\*State/chisq;

format Q18A Percentage. Q18B Percentage. Q18C Percentage. Q18D Percentage. ;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15reg1;

label Q4= 'Ownership Status in 2014'

Q18A ='Highly erodable land'

Q18B='Heavy Soil'

Q18C='Slow draining soil(Perdominantly clay'

Q18D='Sandy Soil';

tables (Q18A Q18B Q18C Q18D)\*Q4/chisq;

format Q4 Ownership. Q18A Percentage. Q18B Percentage. Q18C Percentage. Q18D Percentage. ;

run;

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired'

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc freq data=sasintro.dakota15reg11;

label Q19='Respondent Age'

Q18A ='Highly erodable land'

Q18B='Heavy Soil'

Q18C='Slow draining soil(Perdominantly clay'

Q18D='Sandy Soil';

tables (Q18A Q18B Q18C Q18D)\*Q19/chisq;

format Q19 Age. Q18A Percentage. Q18B Percentage. Q18C Percentage. Q18D Percentage. ;

run;

proc freq data=sasintro.dakota15reg11;

label Q20='Respondent Genger'

Q18A ='Highly erodable land'

Q18B='Heavy Soil'

Q18C='Slow draining soil(Perdominantly clay'

Q18D='Sandy Soil';

tables (Q18A Q18B Q18C Q18D)\*Q20/chisq;

format Q20 Gender. Q18A Percentage. Q18B Percentage. Q18C Percentage. Q18D Percentage. ;

run;

proc freq data=sasintro.dakota15reg11;

label Q21='Respondent Level of Education'

Q18A ='Highly erodable land'

Q18B='Heavy Soil'

Q18C='Slow draining soil(Perdominantly clay'

Q18D='Sandy Soil';

tables (Q18A Q18B Q18C Q18D)\*Q21/chisq;

format Q21 Education. Q18A Percentage. Q18B Percentage. Q18C Percentage. Q18D Percentage. ;

run;

proc freq data=sasintro.dakota15reg11;

label Q22='Principal Occupation'

Q18A ='Highly erodable land'

Q18B='Heavy Soil'

Q18C='Slow draining soil(Perdominantly clay'

Q18D='Sandy Soil';

tables (Q18A Q18B Q18C Q18D)\*Q22/chisq;

format Q22 Occupation. Q18A Percentage. Q18B Percentage. Q18C Percentage. Q18D Percentage. ;

run;

proc freq data=sasintro.dakota15reg11;

label Q23='Gross farm/ranch Sales'

Q18A ='Highly erodable land'

Q18B='Heavy Soil'

Q18C='Slow draining soil(Perdominantly clay'

Q18D='Sandy Soil';

tables (Q18A Q18B Q18C Q18D)\*Q23/chisq;

format Q23 Sales. Q18A Percentage. Q18B Percentage. Q18C Percentage. Q18D Percentage. ;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator';

run;

proc freq data=sasintro.dakota15reg11;

label Q1='farm operator'

Q18A ='Highly erodable land'

Q18B='Heavy Soil'

Q18C='Slow draining soil(Perdominantly clay'

Q18D='Sandy Soil';

tables (Q18A Q18B Q18C Q18D)\*Q1/chisq;

format Q1 Operation. Q18A Percentage. Q18B Percentage. Q18C Percentage. Q18D Percentage. ;

run;

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg11;

label Q3a='Farmland acres operated in 2014'

Q18A ='Highly erodable land'

Q18B='Heavy Soil'

Q18C='Slow draining soil(Perdominantly clay'

Q18D='Sandy Soil';

tables (Q18A Q18B Q18C Q18D)\*Q3a/chisq;

format Q3a Farmland. Q18A Percentage. Q18B Percentage. Q18C Percentage. Q18D Percentage. ;

run;

proc format;

value Cropland 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg1;

tables Q3B\*Region/chisq;

format Q3B Cropland. ;

run;

proc format;

value CRPLand 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg11;

label Q3c='CRP acres in 2014'

Q18A ='Highly erodable land'

Q18B='Heavy Soil'

Q18C='Slow draining soil(Perdominantly clay'

Q18D='Sandy Soil';

tables (Q18A Q18B Q18C Q18D)\*Q3c/chisq;

format Q3c CRPLand. Q18A Percentage. Q18B Percentage. Q18C Percentage. Q18D Percentage. ;

run;

/\*6 Moses did not examine anything about Question 18 on cropland Characteristics,

at a minimum we could examine the distribution of 2014 cropland acres by region

that exibit each characteristics (number of total cropland acres in Q4 multiflied

by percent of 2014 crop land with selected charcteristics and sum by region. the

orginal intent of this question was to connect it to various land use change and

use conversion decisions (Q9 and Q8) \*/

data sasintro.dakota15reg1111;

set sasintro.dakota15reg111;

Q18A1=Q18A/100\*Q3B;

Q18B1=Q18B/100\*Q3B;

Q18C1=Q18C/100\*Q3B;

Q18D1=Q18D/100\*Q3B;

RUN;

proc print data=sasintro.dakota15reg1111;run;

proc format;

value Percentagere 0 ='0 acres'

1-25.00 = '1 to 25.00 acres'

25.01-49.99 ='25.01 to 49.99 acres'

50-74.99 ='50 to 74.99 acres'

75.00-99.99 ='75.00 to 99 acres'

100-149.99 ='100 to 149.99 acres'

150-199.99 ='150 to 199.99 acres'

200-249.99 ='200 to 249.99 acres'

250.00-299.99 ='250 to 299.99 acres'

300-499.99 ='260 to 499.99 acres'

500-high ='500 acres and above';

run;

proc freq data=sasintro.dakota15reg1111;

label

Q18A1 ='Highly erodable land'

Q18B1='Heavy Soil'

Q18C1='Slow draining soil(Perdominantly clay'

Q18D1='Sandy Soil';

tables (Q18A1 Q18B1 Q18C1 Q18D1)\*Region/chisq;

format Q18A1 Percentagere. Q18B1 Percentagere. Q18C1 Percentagere. Q18D1 Percentagere. ;

run;

proc freq data=sasintro.dakota15reg1111;

label

Q18A1 ='Highly erodable land'

Q18B1='Heavy Soil'

Q18C1='Slow draining soil(Perdominantly clay'

Q18D1='Sandy Soil';

tables (Q18A1 Q18B1 Q18C1 Q18D1)\*State/chisq;

format Q18A1 Percentagere. Q18B1 Percentagere. Q18C1 Percentagere. Q18D1 Percentagere. ;

run;

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired'

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc freq data=sasintro.dakota15reg1111;

label Q19='Respondent Age'

Q18A1 ='Highly erodable land'

Q18B1='Heavy Soil'

Q18C1='Slow draining soil(Perdominantly clay'

Q18D1='Sandy Soil';

tables (Q18A1 Q18B1 Q18C1 Q18D1)\*Q19/chisq;

format Q19 Age. Q18A1 Percentagere. Q18B1 Percentagere. Q18C1 Percentagere. Q18D1 Percentagere. ;

run;

proc freq data=sasintro.dakota15reg1111;

label Q20='Respondent Genger'

Q18A1 ='Highly erodable land'

Q18B1='Heavy Soil'

Q18C1='Slow draining soil(Perdominantly clay'

Q18D1='Sandy Soil';

tables (Q18A1 Q18B1 Q18C1 Q18D1)\*Q20/chisq;

format Q20 Gender. Q18A1 Percentagere. Q18B1 Percentagere. Q18C1 Percentagere. Q18D1 Percentagere. ;

run;

proc freq data=sasintro.dakota15reg1111;

label Q21='Respondent Level of Education'

Q18A1 ='Highly erodable land'

Q18B1='Heavy Soil'

Q18C1='Slow draining soil(Perdominantly clay'

Q18D1='Sandy Soil';

tables (Q18A1 Q18B1 Q18C1 Q18D1)\*Q21/chisq;

format Q21 Education. Q18A1 Percentagere. Q18B1 Percentagere. Q18C1 Percentagere. Q18D1 Percentagere. ;

run;

proc freq data=sasintro.dakota15reg1111;

label Q22='Principal Occupation'

Q18A1 ='Highly erodable land'

Q18B1='Heavy Soil'

Q18C1='Slow draining soil(Perdominantly clay'

Q18D1='Sandy Soil';

tables (Q18A1 Q18B1 Q18C1 Q18D1)\*Q22/chisq;

format Q22 Occupation. Q18A1 Percentagere. Q18B1 Percentagere. Q18C1 Percentagere. Q18D1 Percentagere. ;

run;

proc freq data=sasintro.dakota15reg1111;

label Q23='Gross farm/ranch Sales'

Q18A1 ='Highly erodable land'

Q18B1='Heavy Soil'

Q18C1='Slow draining soil(Perdominantly clay'

Q18D1='Sandy Soil';

tables (Q18A1 Q18B1 Q18C1 Q18D1)\*Q23/chisq;

format Q23 Sales. Q18A1 Percentagere. Q18B1 Percentagere. Q18C1 Percentagere. Q18D1 Percentagere. ;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator';

run;

proc freq data=sasintro.dakota15reg1111;

label Q1='farm operator'

Q18A1 ='Highly erodable land'

Q18B1='Heavy Soil'

Q18C1='Slow draining soil(Perdominantly clay'

Q18D1='Sandy Soil';

tables (Q18A1 Q18B1 Q18C1 Q18D1)\*Q1/chisq;

format Q1 Operation. Q18A1 Percentagere. Q18B1 Percentagere. Q18C1 Percentagere. Q18D1 Percentagere. ;

run;

proc means data=sasintro.dakota15reg1111 n nmiss sum min max mean CV std STDERR maxdec=2;

class Region;

var Q18A1 Q18B1 Q18C1 Q18D1 ;

label

Q18A1 ='Highly erodable land'

Q18B1='Heavy Soil'

Q18C1='Slow draining soil(Perdominantly clay'

Q18D1='Sandy Soil';

run;

proc means data=sasintro.dakota15reg1111 n nmiss sum min max mean CV std STDERR maxdec=2;

class State;

var Q18A1 Q18B1 Q18C1 Q18D1 ;

label

Q18A1 ='Highly erodable land'

Q18B1='Heavy Soil'

Q18C1='Slow draining soil(Perdominantly clay'

Q18D1='Sandy Soil';

run;

/\*You can use question 5a and 5b to develop a new variabele call acrechg.

then you cross-tab (chi square) acrechg by a series of variables ins

Q8, Q9, Q10, Q11\*/

data sasintro.dakota15sizeq5;

set sasintro.dakota15clean;

Sizeq5=(Q5A\*10)+Q5B;

RUN;

proc print data=sasintro.dakota15sizeq5;run;

data sasintro.dakota15sizeqnew;

set sasintro.dakota15sizeq5;

ACRECHG=.;

if (Sizeq5=22) then ACRECHG=1;

if (Sizeq5=13)or (Sizeq5=31) then ACRECHG=2;

if (Sizeq5=33) or (Sizeq5=32) or (Sizeq5=23) then ACRECHG=3;

if (Sizeq5=11)or (Sizeq5=12) or (Sizeq5=21) then ACRECHG=4;

RUN;

proc print data=sasintro.dakota15sizeqnew;run;

proc format;

value Currentacres

1 = 'Fewer acres than 10 years ago (by over 10%)'

2 = 'No change or a minor change'

3 = 'More acres than 10 years ago (by over 10%)';

run;

proc format;

value sizevariable

33,32,23='Expand'

22='Same'

11,12,21='DownSize'

13,31='Unsure';

run;

proc freq data=sasintro.dakota15sizeqnew;

label Q5A='Cropland acres operated';

tables (Q5a)\*Sizeq5/chisq;

format Q5a Currentacres. Sizeq5 sizevariable. ;

run;

proc format;

value Currentacres

1 = 'Fewer acres than 10 years ago (by over 10%)'

2 = 'No change or a minor change'

3 = 'More acres than 10 years ago (by over 10%)';

run;

proc freq data=sasintro.dakota15sizeqnew;

label Q5B='Pasture/rangeland acres operated';

tables (Q5B)\*Sizeq5/chisq;

format Q5B Currentacres. Sizeq5 sizevariable. ;

run;

proc format;

value acrechgvari

1='SAME'

2='UNSURE'

3='EXPAND'

4='DOWNSIZE';

run;

proc freq data=sasintro.dakota15sizeqnew;

label Q5A='Cropland acres operated';

tables (Q5a)\*ACRECHG/chisq;

format Q5a Currentacres. ACRECHG acrechgvari. ;

run;

proc freq data=sasintro.dakota15sizeqnew;

label Q5B='Pasture/rangeland acres operated';

tables (Q5B)\*ACRECHG/chisq;

format Q5B Currentacres. ACRECHG acrechgvari. ;

run;

/\*\* question 8 vs acrechg\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15sizeqnew;

label

Q8a='Grown corn and/or soybeans each year'

Q8b='Increased proportion of corn and/or soybeans'

Q8c='Grown wheat each year'

Q8d='Increased proportion of wheat'

Q8e='Grown other grains or oilseed crops each year'

Q8f='Grown alfalfa or other hay crops each year'

Q8g='Adopted or increased use of tile drainage'

Q8h='Adopted or increased use of no-till';

tables (Q8a Q8b Q8c Q8d Q8e Q8f Q8g Q8h)\*STATE/chisq;

format Q8a Response. Q8b Response. Q8c Response. Q8d Response.

Q8e Response. Q8f Response. Q8g Response. Q8h Response.;

run;

proc freq data=sasintro.dakota15sizeqnew;

label

Q8a='Grown corn and/or soybeans each year'

Q8b='Increased proportion of corn and/or soybeans'

Q8c='Grown wheat each year'

Q8d='Increased proportion of wheat'

Q8e='Grown other grains or oilseed crops each year'

Q8f='Grown alfalfa or other hay crops each year'

Q8g='Adopted or increased use of tile drainage'

Q8h='Adopted or increased use of no-till';

tables (Q8a Q8b Q8c Q8d Q8e Q8f Q8g Q8h)\*REGION/chisq;

format Q8a Response. Q8b Response. Q8c Response. Q8d Response.

Q8e Response. Q8f Response. Q8g Response. Q8h Response.;

run;

proc freq data=sasintro.dakota15sizeqnew;

label

Q8a='Grown corn and/or soybeans each year'

Q8b='Increased proportion of corn and/or soybeans'

Q8c='Grown wheat each year'

Q8d='Increased proportion of wheat'

Q8e='Grown other grains or oilseed crops each year'

Q8f='Grown alfalfa or other hay crops each year'

Q8g='Adopted or increased use of tile drainage'

Q8h='Adopted or increased use of no-till';

tables (Q8a Q8b Q8c Q8d Q8e Q8f Q8g Q8h)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q8a Response. Q8b Response. Q8c Response. Q8d Response.

Q8e Response. Q8f Response. Q8g Response. Q8h Response.;

run;

/\* Q9 vs acrechg \*/

proc freq data=sasintro.dakota15sizeqnew;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response.;

run;

proc format;

value Farmacres 0 ='0 acres'

1-99 = '1 to 99 acres'

100-179 ='100 to 179 acres'

180-259 ='180 to 259 acres'

260-499 ='260 to 499 acres'

500-high ='500 acrsa and above';

run;

proc freq data=sasintro.dakota15sizeqnew;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q9aAC Farmacres. Q9bAC Farmacres. Q9cAC Farmacres. Q9dAC Farmacres.

Q9eAC Farmacres. Q9fAC Farmacres.;

run;

proc format;

value Responsechg

1='Yes'

0 ='No';

run;

proc freq data=sasintro.dakota15sizeqnew;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

table (Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q9aCorn responsechg. Q9aSoy responsechg. Q9aWht responsechg. Q9aOth responsechg.

Q9bCorn responsechg. Q9bSoy responsechg. Q9bWht responsechg. Q9bOth responsechg.

Q9cCorn responsechg. Q9cSoy responsechg. Q9cWht responsechg. Q9cOth responsechg.;

run;

/\*Q10 vs ACRECHG\*/

proc format;

value Impact

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15sizeqnew;

label

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables(Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc format;

value gimpact

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

RUN;

proc freq data=sasintro.dakota15sizeqnew;

label Q10B='greatest impact on changes in ouwn land use';

tables Q10B\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q10B gimpact.;

run;

/\*Q11 vs ACRECHG \*/

proc format;

value Future

1='Yes'

2='No'

3='Dont Know';

run;

proc freq data=sasintro.dakota15sizeqnew;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*ACRECHG/norow;

format ACRECHG acrechgvari. Q11a Future. Q11b Future. Q11c Future.;

run;

proc freq data=sasintro.dakota15sizeqnew;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q11a Future. Q11b Future. Q11c Future.;

run;

/\*obtain a frequency distribution of Sizeq5 and also sum the number of cropland

acres, pasture acres, and farmland acres (Q3 variables0 by eliment of Size5\*/

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

value Cropland 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

value CRPLand 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

value Pastureland 0 ='0 acres'

1-9 = '1 to 9 acres'

10-49 ='10 to 49 acres'

50-69 ='50 to 69 acres'

70-99 ='70 to 99 acres'

100-139 ='100 to 139 acres'

140-179 ='140 to 179 acres'

180-219 ='180 to 219 acres'

220-259 ='220 to 259 acres'

260-499 ='260 to 499 acres'

500-999 ='500 to 999 acres'

1000-1999 ='1,000 to 1,999 acres'

2000-4999 ='2,000 to 4,999 acres'

5000-high ='5000 acres and above';

run;

/\* Q3a vs Sizeq5, chisq\*/

proc freq data=sasintro.dakota15sizeqnew;

label

Q3A='farmland acres operated in 2014';

tables Q3A\*Sizeq5/chisq;

format Sizeq5 sizevariable. Q3A Farmland. ;

run;

/\* Q3B vs Sizeq5 chisq\*/

proc freq data=sasintro.dakota15sizeqnew;

label

Q3B='cropland acres operated in 2014';

tables Q3B\*Sizeq5/chisq;

format Sizeq5 sizevariable. Q3B Cropland. ;

run;

/\* Q3C vs Sizeq5 chisq\*/

proc freq data=sasintro.dakota15sizeqnew;

label

Q3C='CRP acres in 2014';

tables Q3C\*Sizeq5/chisq;

format Sizeq5 sizevariable. Q3C CRPLand. ;

run;

/\* Q3D vs Sizeq5 chisq\*/

proc freq data=sasintro.dakota15sizeqnew;

label

Q3D='pasture/rangeland acres in 2014';

tables Q3D\*Sizeq5/chisq;

format Sizeq5 sizevariable. Q3D Pastureland. ;

run;

/\* Q3a vs ACRECHG, chisq\*/

proc freq data=sasintro.dakota15sizeqnew;

label

Q3A='farmland acres operated in 2014';

tables Q3A\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q3A Farmland. ;

run;

/\* Q3B vs ACRECHG chisq\*/

proc freq data=sasintro.dakota15sizeqnew;

label

Q3B='cropland acres operated in 2014';

tables Q3B\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q3B Cropland. ;

run;

/\* Q3C vs ACRECHG chisq\*/

proc freq data=sasintro.dakota15sizeqnew;

label

Q3C='CRP acres in 2014';

tables Q3C\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q3C CRPLand. ;

run;

/\* Q3D vs ACRECHG chisq\*/

proc freq data=sasintro.dakota15sizeqnew;

label

Q3D='pasture/rangeland acres in 2014';

tables Q3D\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q3D Pastureland. ;

run;

/\* means analysis\*/

proc means data=sasintro.dakota15sizeqnew n nmiss sum min max mean CV std STDERR maxdec=2;

class Sizeq5;

var Q3A Q3B Q3C Q3D;

label

Q3A='farmland acres operated in 2014'

Q3B='cropland acres operated in 2014'

Q3C='CRP acres in 2014'

Q3D='pasture/rangeland acres in 2014';

format Sizeq5 sizevariable.;

run;

/\*\* question 8 vs acrechg MENA ANALYSIS\*\*/

proc means data=sasintro.dakota15sizeqnew n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q8a Q8b Q8c Q8d Q8e Q8f Q8g Q8h;

label

Q8a='Grown corn and/or soybeans each year'

Q8b='Increased proportion of corn and/or soybeans'

Q8c='Grown wheat each year'

Q8d='Increased proportion of wheat'

Q8e='Grown other grains or oilseed crops each year'

Q8f='Grown alfalfa or other hay crops each year'

Q8g='Adopted or increased use of tile drainage'

Q8h='Adopted or increased use of no-till';

format ACRECHG acrechgvari. ;

run;

/\*\* question 9 vs acrechg MEAN ANALYSIS\*\*/

proc means data=sasintro.dakota15sizeqnew n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format ACRECHG acrechgvari. ;

run;

proc means data=sasintro.dakota15sizeqnew n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

format ACRECHG acrechgvari. ;

run;

proc means data=sasintro.dakota15sizeqnew n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

format ACRECHG acrechgvari.;

run;

/\* Q10 vs acrechg mean analysis\*/

proc means data=sasintro.dakota15sizeqnew n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

format ACRECHG acrechgvari. ;

run;

proc means data=sasintro.dakota15sizeqnew n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q10B;

label Q10B='greatest impact on changes in ouwn land use';

format ACRECHG acrechgvari. Q10B gimpact.;

run;

/\* Q11 vs acrechg mean analysis\*/

proc means data=sasintro.dakota15sizeqnew n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q11a Q11b Q11c;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

format ACRECHG acrechgvari. Q11a Future. Q11b Future. Q11c Future.;

run;

/\* #Q2 related analysis, where GRASCROP, it is most important that iteam

is completd for the subset of 360+ response where GRASCROP=1\*/

data sasintro.dakota15reg12;

set sasintro.dakota15reg1;

if GRASCROP=1 then GRASCROP=1;

if GRASCROP=0 then GRASCROP=.;

if CRPUSE=1 then CRPUSE=1;

if CRPUSE=0 then CRPUSE=.;

RUN;

proc print data=sasintro.dakota15reg12;run;

/\* cross tab chi square test, Q9 part one GRASCROP region and state based, 19, 20, 21, 22, 23, \*/

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc format;

value grascrpvari

1='yes';

run;

proc freq data=sasintro.dakota15reg12;

label Q19='Respondent Age'

GRASCROP='grass conversion to cropland decison:';

tables GRASCROP\*Q19/chisq;

format Q19 Age. GRASCROP grascrpvari. ;

run;

proc freq data=sasintro.dakota15reg12;

label Q20='Respondent Gender'

GRASCROP='grass conversion to cropland decison:';

tables GRASCROP\*Q20/chisq;

format Q20 Gender. GRASCROP grascrpvari. ;

run;

proc freq data=sasintro.dakota15reg12;

label Q21='Respondent Level of Education'

GRASCROP='grass conversion to cropland decison:';

tables GRASCROP\*Q21/chisq;

format Q21 Education. GRASCROP grascrpvari.;

run;

proc freq data=sasintro.dakota15reg12;

label Q22='Principal Occupation'

GRASCROP='grass conversion to cropland decison:';

tables GRASCROP\*Q22/chisq;

format Q22 Occupation. GRASCROP grascrpvari.;

run;

proc freq data=sasintro.dakota15reg12;

label Q23= 'Gross farm/ranch sales'

GRASCROP='grass conversion to cropland decison:';

tables GRASCROP\*Q23/chisq;

format Q23 Sales. GRASCROP grascrpvari. ;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator';

run;

proc freq data=sasintro.dakota15reg12;

label Q1= 'Year As a Farm Operator'

GRASCROP='grass conversion to cropland decison:';

tables GRASCROP\*Q1/chisq;

format Q1 Operation. GRASCROP grascrpvari. ;

run;

proc format;

value Farmland 10-259='10 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg12;

label Q3A= 'Farmland Acres Operated in 2014'

GRASCROP='grass conversion to cropland decison:';

tables GRASCROP\*Q3A/chisq;

format Q3A Farmland. GRASCROP grascrpvari.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15reg12;

label Q4= 'Best Ownership Status in 2014'

GRASCROP='grass conversion to cropland decison:';

tables GRASCROP\*Q4/chisq;

format Q4 Ownership. GRASCROP grascrpvari.;

run;

proc freq data=sasintro.dakota15reg12;

label

GRASCROP='grass conversion to cropland decison:';

table GRASCROP\*State/chisq;

format GRASCROP grascrpvari.;

run;

proc freq data=sasintro.dakota15reg12;

label GRASCROP='grass conversion to cropland decison:';

table GRASCROP\*Region/chisq;

format GRASCROP grascrpvari.;

run;

proc means data=sasintro.dakota15reg12 n nmiss sum min max mean CV std STDERR maxdec=2;

CLASS GRASCROP;

var Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4;

label GRASCROP='grass conversion to cropland decison:'

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014';

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. GRASCROP grascrpvari.;

run;

/\* CRPUSE and operator charcteristics, if it CRPUSE=1\*/

proc format;

value Age

1='19 to 34 years'

2='35 to 49 years'

3='50 to 59 years'

4='60 to 69 years'

5='70 years and over';

value Gender

1='Male'

2='Female';

value Education

1='Less than high school'

2='High school'

3='Some college/technical school'

4='4-year college degree'

5='Advanced degree (Masters, etc.)';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

3='Own/operate a non-farm business'

4='Retired';

value Sales

12='Less than $99,999'

3='From $100,000 up to $249,999'

4='From $250,000 up to $499,999'

5='From $500,000 up to $999,999'

6='$1 million or more';

run;

proc format;

value grascrpvari

1='yes';

run;

proc freq data=sasintro.dakota15reg12;

label Q19='Respondent Age'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q19/chisq;

format Q19 Age. CRPUSE grascrpvari. ;

run;

proc freq data=sasintro.dakota15reg12;

label Q20='Respondent Gender'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q20/chisq;

format Q20 Gender. CRPUSE grascrpvari. ;

run;

proc freq data=sasintro.dakota15reg12;

label Q21='Respondent Level of Education'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q21/chisq;

format Q21 Education. CRPUSE grascrpvari.;

run;

proc freq data=sasintro.dakota15reg12;

label Q22='Principal Occupation'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q22/chisq;

format Q22 Occupation. CRPUSE grascrpvari.;

run;

proc freq data=sasintro.dakota15reg12;

label Q23= 'Gross farm/ranch sales'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q23/chisq;

format Q23 Sales. CRPUSE grascrpvari. ;

run;

proc format;

value operation

1='Have been a farm operator'

2='less than 10 years as a farm operator'

3='10 to 10 years as a farm operator'

4='20 to 29 years as a farm operator'

5='30 years or more as a farm operator';

run;

proc freq data=sasintro.dakota15reg12;

label Q1= 'Year As a Farm Operator'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q1/chisq;

format Q1 Operation. CRPUSE grascrpvari. ;

run;

proc format;

value Farmland 10-259='10 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

proc freq data=sasintro.dakota15reg12;

label Q3A= 'Farmland Acres Operated in 2014'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q3A/chisq;

format Q3A Farmland. CRPUSE grascrpvari.;

run;

proc format;

value Ownership

1='Own all acres farmed'

2='Own most acres farmed, rented the remainder'

3='Own and rent roughly equal number of farmland acres'

4='Rented most of the acres farmed,owned the remainder'

5='Rented all acres farmland'

6='Professional farm manager';

run;

proc freq data=sasintro.dakota15reg12;

label Q4= 'Best Ownership Status in 2014'

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

tables CRPUSE\*Q4/chisq;

format Q4 Ownership. CRPUSE grascrpvari.;

run;

proc freq data=sasintro.dakota15reg12;

label

CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

table CRPUSE\*State/chisq;

format CRPUSE grascrpvari.;

run;

proc freq data=sasintro.dakota15reg12;

label CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use';

table CRPUSE\*Region/chisq;

format CRPUSE grascrpvari.;

run;

proc means data=sasintro.dakota15reg12 n nmiss sum min max mean CV std STDERR maxdec=2;

CLASS CRPUSE;

var Q19 Q20 Q21 Q22 Q23 Q1 Q3A Q4;

label CRPUSE='Some changes CRP during past 10 years vs no changes in CRP use'

Q19='Respondent Age'

Q20='Respondent Gender'

Q21='Respondent Level of Education'

Q22='Principal Ocupation'

Q23='Gross farm/ranch sales'

Q1=' Years as a farm operator'

Q3A='Farmland acres operated in 2014'

Q4='Ownership Status in 2014';

format Q19 Age. Q20 Gender. Q21 Education. Q22 Occupation. Q23 Sales. Q1 Operation.

Q3A Farmland. Q4 Ownership. CRPUSE grascrpvari.;

run;

/\* latest.....You can use question 5a and 5b to develop a new variabele call acrechg.

then you cross-tab (chi square) acrechg by a series of variables ins

Q8, Q9, Q10, Q11.......\*/

data sasintro.dakota15sizeq51;

set sasintro.dakota15clean;

Sizeq5=.;

if Q5A=. and Q5B>0 then Sizeq5=Q5B;

if Q5B=. and Q5A>0 then Sizeq5=Q5A\*10;

if (Q5A>0 and Q5B>0) then Sizeq5=(Q5A\*10)+Q5B;

RUN;

proc print data=sasintro.dakota15sizeq51;run;

data sasintro.dakota15sizeqnew1;

set sasintro.dakota15sizeq51;

ACRECHG=.;

if (Sizeq5=22) or (Sizeq5=20)or (Sizeq5=2)then ACRECHG=1;

if (Sizeq5=13)or (Sizeq5=31) then ACRECHG=2;

if (Sizeq5=33) or (Sizeq5=32) or (Sizeq5=23) or (Sizeq5=30) or (Sizeq5=3) then ACRECHG=3;

if (Sizeq5=11)or (Sizeq5=12) or (Sizeq5=21) or (Sizeq5=10)or (Sizeq5=1)then ACRECHG=4;

RUN;

proc print data=sasintro.dakota15sizeqnew1;run;

proc format;

value Currentacres

1 = 'Fewer acres than 10 years ago (by over 10%)'

2 = 'No change or a minor change'

3 = 'More acres than 10 years ago (by over 10%)';

run;

proc format;

value sizevariable

33,32,23,30,3='Expand'

22,20,2='Same'

11,12,21,10,1='DownSize'

13,31='Unsure';

run;

proc freq data=sasintro.dakota15sizeqnew1;

label Q5A='Cropland acres operated';

tables (Q5a)\*Sizeq5/chisq;

format Q5a Currentacres. Sizeq5 sizevariable. ;

run;

proc format;

value Currentacres

1 = 'Fewer acres than 10 years ago (by over 10%)'

2 = 'No change or a minor change'

3 = 'More acres than 10 years ago (by over 10%)';

run;

proc freq data=sasintro.dakota15sizeqnew1;

label Q5B='Pasture/rangeland acres operated';

tables (Q5B)\*Sizeq5/chisq;

format Q5B Currentacres. Sizeq5 sizevariable. ;

run;

proc format;

value acrechgvari

1='SAME'

2='UNSURE'

3='EXPAND'

4='DOWNSIZE';

run;

proc freq data=sasintro.dakota15sizeqnew1;

label Q5A='Cropland acres operated';

tables (Q5a)\*ACRECHG/chisq;

format Q5a Currentacres. ACRECHG acrechgvari. ;

run;

proc freq data=sasintro.dakota15sizeqnew1;

label Q5B='Pasture/rangeland acres operated';

tables (Q5B)\*ACRECHG/chisq;

format Q5B Currentacres. ACRECHG acrechgvari. ;

run;

/\*\* question 8 vs acrechg\*\*/

proc format;

value Response

1='Yes'

2='No';

run;

proc freq data=sasintro.dakota15sizeqnew1;

label

Q8a='Grown corn and/or soybeans each year'

Q8b='Increased proportion of corn and/or soybeans'

Q8c='Grown wheat each year'

Q8d='Increased proportion of wheat'

Q8e='Grown other grains or oilseed crops each year'

Q8f='Grown alfalfa or other hay crops each year'

Q8g='Adopted or increased use of tile drainage'

Q8h='Adopted or increased use of no-till';

tables (Q8a Q8b Q8c Q8d Q8e Q8f Q8g Q8h)\*STATE/chisq;

format Q8a Response. Q8b Response. Q8c Response. Q8d Response.

Q8e Response. Q8f Response. Q8g Response. Q8h Response.;

run;

proc freq data=sasintro.dakota15sizeqnew1;

label

Q8a='Grown corn and/or soybeans each year'

Q8b='Increased proportion of corn and/or soybeans'

Q8c='Grown wheat each year'

Q8d='Increased proportion of wheat'

Q8e='Grown other grains or oilseed crops each year'

Q8f='Grown alfalfa or other hay crops each year'

Q8g='Adopted or increased use of tile drainage'

Q8h='Adopted or increased use of no-till';

tables (Q8a Q8b Q8c Q8d Q8e Q8f Q8g Q8h)\*REGION/chisq;

format Q8a Response. Q8b Response. Q8c Response. Q8d Response.

Q8e Response. Q8f Response. Q8g Response. Q8h Response.;

run;

proc freq data=sasintro.dakota15sizeqnew1;

label

Q8a='Grown corn and/or soybeans each year'

Q8b='Increased proportion of corn and/or soybeans'

Q8c='Grown wheat each year'

Q8d='Increased proportion of wheat'

Q8e='Grown other grains or oilseed crops each year'

Q8f='Grown alfalfa or other hay crops each year'

Q8g='Adopted or increased use of tile drainage'

Q8h='Adopted or increased use of no-till';

tables (Q8a Q8b Q8c Q8d Q8e Q8f Q8g Q8h)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q8a Response. Q8b Response. Q8c Response. Q8d Response.

Q8e Response. Q8f Response. Q8g Response. Q8h Response.;

run;

/\* Q9 vs acrechg \*/

proc freq data=sasintro.dakota15sizeqnew1;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response.;

run;

proc format;

value Farmacres 0 ='0 acres'

1-99 = '1 to 99 acres'

100-179 ='100 to 179 acres'

180-259 ='180 to 259 acres'

260-499 ='260 to 499 acres'

500-high ='500 acrsa and above';

run;

proc freq data=sasintro.dakota15sizeqnew1;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

table (Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q9aAC Farmacres. Q9bAC Farmacres. Q9cAC Farmacres. Q9dAC Farmacres.

Q9eAC Farmacres. Q9fAC Farmacres.;

run;

proc format;

value Responsechg

1='Yes'

0 ='No';

run;

proc freq data=sasintro.dakota15sizeqnew1;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

table (Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q9aCorn responsechg. Q9aSoy responsechg. Q9aWht responsechg. Q9aOth responsechg.

Q9bCorn responsechg. Q9bSoy responsechg. Q9bWht responsechg. Q9bOth responsechg.

Q9cCorn responsechg. Q9cSoy responsechg. Q9cWht responsechg. Q9cOth responsechg.;

run;

/\*Q10 vs ACRECHG\*/

proc format;

value Impact

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc freq data=sasintro.dakota15sizeqnew1;

label

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

tables(Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q10A1 Impact. Q10A2 Impact. Q10A3 Impact. Q10A4 Impact. Q10A5 Impact.

Q10A6 Impact. Q10A7 Impact. Q10A8 Impact. Q10A9 Impact. Q10A10 Impact.;

run;

proc format;

value gimpact

01 = 'Changing crop prices'

02 = 'Changing prices in input markets (seed, fertilizer, chemicals, etc.) '

03 = 'Availability of crop and revenue insurance policies'

04= 'Availability of drought-tolerant seed'

05= 'Developments in pest management practices, including pest management seed traits'

06= 'Improved crop yields (other than seed related traits) '

07 = 'Development of more efficient cropping equipment'

08 = 'Labor availability problems'

09 = 'Improving wildlife habitat'

10 = 'Changing weather /climate patterns';

RUN;

proc freq data=sasintro.dakota15sizeqnew1;

label Q10B='greatest impact on changes in ouwn land use';

tables Q10B\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q10B gimpact.;

run;

/\*Q11 vs ACRECHG \*/

proc format;

value Future

1='Yes'

2='No'

3='Dont Know';

run;

proc freq data=sasintro.dakota15sizeqnew1;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*ACRECHG/norow;

format ACRECHG acrechgvari. Q11a Future. Q11b Future. Q11c Future.;

run;

proc freq data=sasintro.dakota15sizeqnew1;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

tables (Q11a Q11b Q11c)\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q11a Future. Q11b Future. Q11c Future.;

run;

/\*obtain a frequency distribution of Sizeq5 and also sum the number of cropland

acres, pasture acres, and farmland acres (Q3 variables0 by eliment of Size5\*/

proc format;

value Farmland 10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

value Cropland 0 ='0 acres'

1-9 = '1 to 9 acres'

10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

value CRPLand 0 ='0 acres'

1-9 = '1 to 9 acres'

10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

value Pastureland 0 ='0 acres'

1-9 = '1 to 9 acres'

10-259='1 to 259 acres'

260-499='260 to 499 acres'

500-999='500 to 999 acres'

1000-1999='1000 to 1999 acres'

2000-4999='2000 to 4999 acres'

5000-high ='5000 acres and above';

run;

/\* Q3a vs Sizeq5, chisq\*/

proc freq data=sasintro.dakota15sizeqnew1;

label

Q3A='farmland acres operated in 2014';

tables Q3A\*Sizeq5/chisq;

format Sizeq5 sizevariable. Q3A Farmland. ;

run;

/\* Q3B vs Sizeq5 chisq\*/

proc freq data=sasintro.dakota15sizeqnew1;

label

Q3B='cropland acres operated in 2014';

tables Q3B\*Sizeq5/chisq;

format Sizeq5 sizevariable. Q3B Cropland. ;

run;

/\* Q3C vs Sizeq5 chisq\*/

proc freq data=sasintro.dakota15sizeqnew1;

label

Q3C='CRP acres in 2014';

tables Q3C\*Sizeq5/chisq;

format Sizeq5 sizevariable. Q3C CRPLand. ;

run;

/\* Q3D vs Sizeq5 chisq\*/

proc freq data=sasintro.dakota15sizeqnew1;

label

Q3D='pasture/rangeland acres in 2014';

tables Q3D\*Sizeq5/chisq;

format Sizeq5 sizevariable. Q3D Pastureland. ;

run;

/\* Q3a vs ACRECHG, chisq\*/

proc freq data=sasintro.dakota15sizeqnew1;

label

Q3A='farmland acres operated in 2014';

tables Q3A\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q3A Farmland. ;

run;

/\* Q3B vs ACRECHG chisq\*/

proc freq data=sasintro.dakota15sizeqnew1;

label

Q3B='cropland acres operated in 2014';

tables Q3B\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q3B Cropland. ;

run;

/\* Q3C vs ACRECHG chisq\*/

proc freq data=sasintro.dakota15sizeqnew1;

label

Q3C='CRP acres in 2014';

tables Q3C\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q3C CRPLand. ;

run;

/\* Q3D vs ACRECHG chisq\*/

proc freq data=sasintro.dakota15sizeqnew1;

label

Q3D='pasture/rangeland acres in 2014';

tables Q3D\*ACRECHG/chisq;

format ACRECHG acrechgvari. Q3D Pastureland. ;

run;

/\* means analysis\*/

proc means data=sasintro.dakota15sizeqnew1 n nmiss sum min max mean CV std STDERR maxdec=2;

class Sizeq5;

var Q3A Q3B Q3C Q3D;

label

Q3A='farmland acres operated in 2014'

Q3B='cropland acres operated in 2014'

Q3C='CRP acres in 2014'

Q3D='pasture/rangeland acres in 2014';

format Sizeq5 sizevariable.;

run;

/\*\* question 8 vs acrechg MENA ANALYSIS\*\*/

proc means data=sasintro.dakota15sizeqnew1 n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q8a Q8b Q8c Q8d Q8e Q8f Q8g Q8h;

label

Q8a='Grown corn and/or soybeans each year'

Q8b='Increased proportion of corn and/or soybeans'

Q8c='Grown wheat each year'

Q8d='Increased proportion of wheat'

Q8e='Grown other grains or oilseed crops each year'

Q8f='Grown alfalfa or other hay crops each year'

Q8g='Adopted or increased use of tile drainage'

Q8h='Adopted or increased use of no-till';

format ACRECHG acrechgvari. ;

run;

/\*\* question 9 vs acrechg MEAN ANALYSIS\*\*/

proc means data=sasintro.dakota15sizeqnew1 n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label

Q9aYN='Conversion of native grass to cropland'

Q9bYN='Conversion of tamend grassland to cropland'

Q9cYN='Conversion of CRP land to cropland'

Q9dYN='Conversion of CRP land to pasture/hay'

Q9eYN='Enrollment of farmland acres to CRP'

Q9fYN='Enrollment of land into WRP (wetland reserve) or grass easement program';

format ACRECHG acrechgvari. ;

run;

proc means data=sasintro.dakota15sizeqnew1 n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC;

label

Q9aAC='Conversion of native grass to cropland'

Q9bAC='Conversion of tamend grassland to cropland'

Q9cAC='Conversion of CRP land to cropland'

Q9dAC='Conversion of CRP land to pasture/hay'

Q9eAC='Enrollment of farmland acres to CRP'

Q9fAC='Enrollment of land into WRP (wetland reserve) or grass easement program';

format ACRECHG acrechgvari. ;

run;

proc means data=sasintro.dakota15sizeqnew1 n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q9aCorn Q9aSoy Q9aWht Q9aOth Q9bCorn Q9bSoy Q9bWht Q9bOth Q9cCorn Q9cSoy Q9cWht Q9cOth;

label

Q9aCorn='Conversion of native grass to Corn land'

Q9aSoy='Conversion of native grass to Soybean land'

Q9aWht='Conversion of native grass to Wheat land'

Q9aOth='Conversion of native grass to Other use'

Q9bCorn='Conversion of tamend grassland to Corn land'

Q9bSoy='Conversion of tamend grassland to Soy land'

Q9bWht='Conversion of tamend grassland to Wheat land'

Q9bOth='Conversion of tamend grassland to Other use'

Q9cCorn='Conversion of CRP land to Corn land'

Q9cSoy='Conversion of CRP land to Soy land'

Q9cWht='Conversion of CRP land to Wheat land'

Q9cOth='Conversion of CRP land to Other use' ;

format ACRECHG acrechgvari.;

run;

/\* Q10 vs acrechg mean analysis\*/

proc means data=sasintro.dakota15sizeqnew1 n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10;

label

Q10a1='Changing crop prices'

Q10a2='Changing prices in input markets (seed, fertilizer, chemicals, etc.)'

Q10a3='Availability of crop and revenue insurance policies'

Q10a4='Availability of drought-tolerant seed'

Q10a5='Developments in pest management practices, including pest management seed traits'

Q10a6='Improved crop yields (other than seed related traits)'

Q10a7='Development of more efficient cropping equipment'

Q10a8='Labor availability problems'

Q10a9='Improving wildlife habitat'

Q10a10='Changing weather /climate patterns';

format ACRECHG acrechgvari. ;

run;

proc means data=sasintro.dakota15sizeqnew1 n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q10B;

label Q10B='greatest impact on changes in ouwn land use';

format ACRECHG acrechgvari. Q10B gimpact.;

run;

/\* Q11 vs acrechg mean analysis\*/

proc means data=sasintro.dakota15sizeqnew1 n nmiss sum min max mean CV std STDERR maxdec=2;;

CLASS ACRECHG;

var Q11a Q11b Q11c;

label

Q11a='Plan to convert native grassland to cropland in next 10 years'

Q11b='Plan to convert tame grassland to cropland in next 10 years'

Q11c='Plan to convert cropland to grassland in next 10 years';

format ACRECHG acrechgvari. Q11a Future. Q11b Future. Q11c Future.;

run;