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;

/\*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;

/\*question 2 and three \*/

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

var Q3a Q3b Q3c Q3d;

label CaseID='State'

Q2C1='County 1'

Q3a ='Total farmland acres in 2014'

Q3b ='Cropland (excluding CRP) acres in 2014'

Q3c ='CRP acres in 2014'

Q3d ='Pasture or rangeland acres in 2014';

table (STATE), Q3a Q3b Q3c Q3d ;

format Q3a comma10.;

run;

/\*\* Summary Statistics on 3\*\*/

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

class Region;

var Q3a Q3b Q3c Q3d;

label

Q3a ='Total Farmland acres'

Q3b ='Cropland (excluding CRP) acres'

Q3c ='CRP acres'

Q3d ='Pasture/Rangeland acres';

run;

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

class State;

var Q3a Q3b Q3c Q3d;

label Q2C1='Region'

Q3a ='Total Farmland acres'

Q3b ='Cropland (excluding CRP) acres'

Q3c ='CRP acres'

Q3d ='Pasture/Rangeland acres';

run;

/\*\* question 4\*\*/

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'

7='Other'

.='Missing';

run;

proc freq data=sasintro.dakota15;

label CaseID='State'

Q4 ='Ownership Status of Land Farmed in 2014';

tables Q4\*state / nocol norow nocum;

format Q4 Ownership. CaseID State.;

run;

/\*\* 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\*State / norow nocum;

format Q5a Currentacres. CaseID State.;

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%)';

proc freq data=sasintro.dakota15;

label CaseID='REGION'

Q5a ='Cropland acres operated';

tables Q5a\*REGION / norow nocum;

format Q5a Currentacres. ;

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\*STATE / norow nocum;

format Q5b Currentacres. CaseID State.;

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%)';

proc freq data=sasintro.dakota15;

label CaseID='REGION'

Q5b ='Pasture/rangeland acres operated';

tables Q5b\*REGION / norow nocum;

format Q5b Currentacres. CaseID REGION.;

run;

/\*\* question 6\*\*/

data sasintro.dakota15a;

set sasintro.dakota15;

if (Q6cornY=0) or (Q6cornY=280) then delete;

if (Q6cornY=500) or (Q6cornY=902) then delete;

if (Q6soyY=0) or (Q6soyY=128)then delete;

if (Q6soyY=162) or (Q6soyY=176)then delete;

if (Q6soyY=258) or (Q6soyY=300)then delete;

if (Q6WhY=0) or (Q6WhY=120)then delete;

if (Q6soyY=500)then delete;

if (Q6AlfY=0) or (Q6AlfY=120)then delete;

if (Q6AlfY=170) or (Q6AlfY=200)then delete;

if (Q6AlfY=240) or (Q6AlfY=500)then delete;

if (Q6AlfY=22) or (Q6AlfY=25)then delete;

if (Q6AlfY=40) or (Q6AlfY=42)then delete;

if (Q6AlfY=45) or (Q6AlfY=48)then delete;

if (Q6AlfY=56) or (Q6AlfY=15)then delete;

run;

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

class Region;

var Q6cornA Q6soyA Q6WhA Q6AlfA Q6cornY Q6soyY Q6WhY Q6AlfY;

label CaseID='State'

Q2C1='County 1'

Q6cornA='Corn Acres'

Q6soyA='Soybean Acres'

Q6WhA='Wheat Acres'

Q6AlfA='Alfalfa Acres'

Q6CornY='Corn Yeild'

Q6soyY='Soybean Yield'

Q6WhY='Wheat Yeild'

Q6AlfY='Alfalfa Yield';

table (region\*Q2C1), (Q6cornA Q6soyA Q6WhA Q6AlfA Q6cornY Q6soyY Q6WhY Q6AlfY);

run;

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

class caseId state;

var Q6cornA Q6soyA Q6WhA Q6AlfA Q6cornY Q6soyY Q6WhY Q6AlfY;

label

Q6cornA='Corn Acres'

Q6soyA='Soybean Acres'

Q6WhA='Wheat Acres'

Q6AlfA='Alfalfa Acres'

Q6CornY='Corn Yeild'

Q6soyY='Soybean Yield'

Q6WhY='Wheat Yeild'

Q6AlfY='Alfalfa Yield';

table (CaseID\*Q2C2), (Q6cornA Q6soyA Q6WhA Q6AlfA Q6cornY Q6soyY Q6WhY Q6AlfY);

format CaseID State. Q2C2 county.;

run;

/\*\* Summary Statistics on 6\*\*/

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

class State;

var Q6cornA Q6soyA Q6WhA Q6AlfA;

label CaseID='State'

Q6cornA='Corn Acres'

Q6soyA='Soybean Acres'

Q6WhA='Wheat Acres'

Q6AlfA='Alfalfa Acres';

run;

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

class Region;

var Q6cornA Q6soyA Q6WhA Q6AlfA;

label CaseID='Regions'

Q6cornA='Corn Acres'

Q6soyA='Soybean Acres'

Q6WhA='Wheat Acres'

Q6AlfA='Alfalfa Acres';

run;

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

class State;

var Q6cornA Q6soyA Q6WhA Q6AlfA;

label CaseID='State'

Q6cornA='Corn Acres'

Q6soyA='Soybean Acres'

Q6WhA='Wheat Acres'

Q6AlfA='Alfalfa Acres';

table (State),(Q6cornA Q6soyA Q6WhA Q6AlfA);

run;

proc means data=sasintro.dakota15 n nimss min max mean std maxdec=2;

class region;

var Q6cornY Q6soyY Q6WhY Q6AlfY;

label CaseID='Regions'

Q6CornY='Corn Bu/acre'

Q6soyY='Soybean Bu/acre'

Q6WhY='Wheat Bu/acre'

Q6AlfY='Alfalfa ton/acre';

run;

/\*\*regional acrage analysis\*\*/

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

class state;

var Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC;

label Q2C1='Regions'

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 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 CaseID='State'

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;

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 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';

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

format CaseID State. 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 CaseID Q10b;

label CaseID='State';

tables Q10b,CaseID;

format CaseID State. Q10b gimpact.;

run;

/\*my data anyalysis start \*/

/\*question 10 \*/

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 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';

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 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';

run;

/\*region and State based frequency 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;

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 10 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 \*/

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;

/\* 10 b means analysis \*/

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 CaseID Q10b;

label CaseID='State';

tables Q10b,CaseID;

format CaseID State. 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 State;

var Q10B;

label CaseID='State';

format CaseID State. 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;

label CaseID='Region';

format CaseID Region. Q10b gimpact.;

run;

/\* means by selected farm operator \*/

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'

9='Missing';

value Gender

1='Male'

2='Female'

9='Missing';

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.)'

9='Missing';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

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

4='Retired'

5='Other'

9='Missing';

value Sales

1='Less than $50,000'

2='From $50,000 up to $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'

9='Missing';

run;

proc format;

value Farmland 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'

.='Missing';

run;

proc means data=sasintro.dakota15 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.dakota15 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.dakota15 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.dakota15 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.dakota15 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.dakota15 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 means data=sasintro.dakota15 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'

7='Other'

.='Missing';

run;

proc means data=sasintro.dakota15 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;

/\* frequency distribution by Selected Farm operator\*/

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'

9='Missing';

value Gender

1='Male'

2='Female'

9='Missing';

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.)'

9='Missing';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

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

4='Retired'

5='Other'

9='Missing';

value Sales

1='Less than $50,000'

2='From $50,000 up to $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'

9='Missing';

proc format;

value Impact

1='No Impact'

2='Slight Impact'

3='Some Impact'

4='Quite a bit of Impact'

5='Great Impact';

run;

proc format;

value Farmland 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'

.='Missing';

run;

proc freq data=sasintro.dakota15;

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.dakota15;

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.dakota15;

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.dakota15;

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.dakota15;

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.dakota15;

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 freq data=sasintro.dakota15;

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;

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'

7='Other'

.='Missing';

run;

proc freq data=sasintro.dakota15;

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;

/\* frequency distribution by Selected Farm operator 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'

9='Missing';

value Gender

1='Male'

2='Female'

9='Missing';

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.)'

9='Missing';

value Occupation

1='Farming or Ranching'

2='Employment in off-farm job'

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

4='Retired'

5='Other'

9='Missing';

value Sales

1='Less than $50,000'

2='From $50,000 up to $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'

9='Missing';

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 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.dakota15;

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.dakota15;

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.dakota15;

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.dakota15;

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.dakota15;

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 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'

.='Missing';

run;

proc freq data=sasintro.dakota15;

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'

7='Other'

.='Missing';

run;

proc freq data=sasintro.dakota15;

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.dakota15 n nmiss sum min max mean std maxdec=1;

class CaseID State;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN ;

label CaseID='State'

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 CaseID State. Q9aYN Response. Q9bYN Response. Q9cYN Response. Q9dYN Response.

Q9eYN Response. Q9fYN Response.;

run;

proc means data=sasintro.dakota15 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.dakota15;

label CaseID='State'

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)\*CaseID/norow;

format CaseID State. 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.dakota15;

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 tabulate\*/

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

class CaseID;

var Q9aYN Q9bYN Q9cYN Q9dYN Q9eYN Q9fYN;

label CaseID='State'

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), CaseID;

format CaseID State.;

run;

proc tabulate data=sasintro.dakota15 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 analysis with means\*/

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

class CaseID State;

var Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC ;

label CaseID='State'

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 CaseID State. ;

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 analysis with frequency\*/

proc format;

value Farmacres 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'

.='Missing';

run;

proc freq data=sasintro.dakota15;

label CaseID='State'

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)\*CaseID/norow;

format CaseID State. 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 analysis with tabulate\*/

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

class CaseID;

var Q9aAC Q9bAC Q9cAC Q9dAC Q9eAC Q9fAC;

label CaseID='State'

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),CaseID;

format CaseID 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 analysis tabulate\*/

proc format;

value response

0='No'

1='Yes';

proc tabulate data=sasintro.dakota15;

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

label CaseID='State'

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),CaseID;

format CaseID State. 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 analysis frequency\*/

proc format;

value Response

1='Yes'

0 ='No';

run;

proc freq data=sasintro.dakota15;

label CaseID='State'

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)\*CaseID/norow;

format CaseID State. 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 analysis means\*/

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

class CaseID State;

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

label CaseID='State'

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 CaseID State. ;

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;

\*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;

run;

proc print data=sasintro.dakota15num;

run;

/\*simple regression\*/

proc reg data=sasintro.dakota15num;

model Q10a1= Region;

run;

proc reg data=sasintro.dakota15;

label CaseID='State'

NQ10a1='Changing crop prices'

class Q10a1 CaseID / param=ref;

model Q10a1 = CaseID /rsquare;

format CaseID State.;

run;

proc reg data=sasintro.dakota15;

label CaseID='Region'

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 Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10 CaseID / param=ref;

model Q10A1 Q10A2 Q10a3 Q10A4 Q10A5 Q10A6 Q10A7 Q10A8 Q10A9 Q10A10 = CaseID /rsquare;

format CaseID Region.;

run;