| **Variable** | **AB (N = 177)** | **AB** | **MB (N = 102)** | **MN** | **SK (N = 178)** | **SK** |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Survey** | **StatsCan** | **Survey** | **StatsCan** | **Survey** | **StatsCan** |
|  |  |  |  |  |  |  |
|  | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* |
| Converted Wetland Past 5years | 21 (12%) |  | 17 (17%) |  | 45 (25%) |  |
| Sex (Male =1) | 167 (94%) | 20,410 (44%) | 100 (98%) | 8,720 (46%) | 167 (94%) | 20,560 (46%) |
| Age |  |  |  |  |  |  |
| Under 35 years | 10 (5.6%) | 1,890 (8%) | 11 (11%) | 990 (11%) | 3 (1.7%) | 2,205 (10%) |
| Between 35 – 54 years | 64 (36%) | 7,630 (33%) | 37 (36%) | 3,315 (35%) | 45 (25%) | 7,385 (33%) |
| Over 54 years | 101 (57%) | 13,700 (59%) | 53 (52%) | 5,075 (54%) | 127 (71%) | 12,935 (57%) |
| Education |  |  |  |  |  |  |
| No Schooling | 2 (1.1%) |  | 0 (0%) |  | 0 (0%) |  |
| High School | 38 (21%) |  | 36 (35%) |  | 59 (33%) |  |
| Some Postsecondary | 42 (24%) |  | 20 (20%) |  | 34 (19%) |  |
| Vocational Diploma | 53 (30%) |  | 19 (19%) |  | 38 (21%) |  |
| University Degree | 41 (23%) | 5,305 (1%) | 25 (25%) | 1,850(1%) | 45 (25%) | 4,455 (1%) |
| Do not Know | 1 (0.6%) |  | 2 (2.0%) |  | 2 (1.1%) |  |

**Table 1a. Summary Statistics of Demographic Variables (Survey versus Some Key Canada Census of Ag. Key Demographic Variables)**

**Table 1b. Summary Statistics of Demographic Variables (Survey versus Some Key Canada Census of Ag. Key Demographic Variables)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variable** | **AB (N = 177)** | **AB** | **MB (N = 102)** | **MN** | **SK (N = 178)** | **SK** |
|  | **Survey** | **StatsCan** | **Survey** | **StatsCan** | **Survey** | **StatsCan** |
|  | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* |
| Have Children? (yes =1) | 160 (90%) |  | 93 (91%) |  | 154 (87%) |  |
| Children likely to takeover (yes =1) | 119 (67%) | 3,447 (97%) | 74 (73%) | 1,155 (95%) | 94 (53%) | 2,945 (96%) |
| Farm Business Type |  |  |  |  |  |  |
| Sole Proprietorship | 60 (34%) | 21,328 (52%) | 24 (24%) | 8,030 (54%) | 63 (35%) | 18,637 (54%) |
| Partnership | 25 (14%) | 9,015 (22%) | 13 (13%) | 3,409 (23%) | 31 (17%) | 6,252 (18%) |
| Family Corporation | 84 (47%) | 9,287 (23%) | 62 (61%) | 3,084 (21%) | 81 (46%) | 8,758 (25%) |
| Non-family Corporation | 4 (2.3%) | 803 (2%) | 1 (1.0%) | 206 (1.4%) | 1 (0.6%) | 649 (2%) |
|  |  |  |  |  |  |  |
|  | Mean (SD) |  | Mean (SD) |  | Mean (SD) |  |
| Prop HH Income from Farming | 82 (23) |  | 85 (21) |  | 84 (25) |  |
| Farm Operation (years) | 65 (45) |  | 61 (38) |  | 67 (33) |  |
|  |  |  |  |  |  |  |

**Table 2. Summary Statistics of Land Use Variables**

| Variable | **AB (N = 177)**  **Survey** | **AB**  **StatsCan** | **MB (N = 102)**  **Survey** | **MN**  **StatsCan** | **SK (N = 178)**  **Survey** | **SK**  **StatsCan** |
| --- | --- | --- | --- | --- | --- | --- |
|  | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* |
| Land type conversion (past 5 years) |  |  |  |  |  |  |
| Converted bush (yes =1) | 36 (20%) |  | 32 (31%) |  | 56 (31%) |  |
| Converted wetland (yes =1) | 21 (12%) |  | 17 (17%) |  | 45 (25%) |  |
| Converted native grassland ((yes =1) | 16 (9.0%) |  | 17 (17%) |  | 24 (13%) |  |
| Precision agriculture |  |  |  |  |  |  |
| Auto guidance | 157 (89%) | 10,462 (15%) | 95 (93%) | 5,192 (17%) | 157 (88%) | 14,343 (19%) |
| GPS | 55 (31%) | 13,684 (19%) | 50 (49%) | 6,204 (21%) | 50 (28%) | 17,475 (24%) |
| Variable rate application | 45 (25%) |  | 30 (29%) |  | 63 (35%) |  |
| Drones | 29 (16%) |  | 21 (21%) |  | 17 (9.6%) |  |
| Soil test | 126 (71%) | 2,589 (4%) | 79 (77%) | 1,482 (5%) | 118 (66%) | 3,097 (4%) |
| Slow-release fertilizer | 63 (36%) |  | 43 (42%) |  | 68 (38%) |  |
|  |  |  |  |  |  |  |

**Table 2. Continued. Summary Statistics of Land Use Variables**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **AB (N = 177)**  **Survey** |  | **MB (N = 102)**  **Survey** |  | **SK (N = 178)**  **Survey** |  |
|  | *Total Number (Percentage)* |  | *Total Number (Percentage)* |  | *Total Number (Percentage)* |  |
| Land purchase decisions |  |  |  |  |  |  |
| rentland\_next5yrs | 27 (15%) |  | 7 (6.9%) |  | 14 (7.9%) |  |
| buyland\_next5yrs | 26 (15%) |  | 22 (22%) |  | 28 (16%) |  |
| bothrentbuy\_next5yrs | 73 (41%) |  | 46 (45%) |  | 68 (38%) |  |
| notrentbuy\_next5yrs | 51 (29%) |  | 27 (26%) |  | 68 (38%) |  |
| Land use in 2019 |  |  |  |  |  |  |
| Zero tillage | 139 (79%) |  | 54 (53%) |  | 160 (90%) |  |
| Continuous cropping | 159 (90%) |  | 85 (83%) |  | 162 (91%) |  |
| Plow green crops | 13 (7.3%) |  | 3 (2.9%) |  | 2 (1.1%) |  |
| Winter crops | 27 (15%) |  | 26 (25%) |  | 15 (8.4%) |  |
| Rotational grazing | 58 (33%) |  | 19 (19%) |  | 32 (18%) |  |
| Infield winter grazing | 51 (29%) |  | 12 (12%) |  | 23 (13%) |  |
| Shelter belts | 111 (63%) |  | 66 (65%) |  | 90 (51%) |  |

**Table 2. Continued. Summary Statistics of Land Use Variables**

| Variable | **AB (N = 177)**  **Survey** | **AB**  **StatsCan** | **MB (N = 102)**  **Survey** | **MN**  **StatsCan** | **SK (N = 178)**  **Survey** | **SK**  **StatsCan** |
| --- | --- | --- | --- | --- | --- | --- |
|  | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* |
| Percentage of Acreage owned | 4.6E5 (45%) | 29.3E6 (58%) | 2.9E5 (69%) | 11.6E6 (65%) | 7.1E5 (70%) | 37.9E6 (62%) |
| Percentage of Acreage rented | 2.8E5 (28%) | 12E6 (24%) | 1.2E5 (28%) | 5E6 (28%) | 2.7E5 (27%) | 17E6 (28%) |
|  |  |  |  |  |  |  |
|  | *Mean (SD)* |  | *Mean (SD)* |  | *Mean (SD)* |  |
| Acres Cropland owned | 3,331 (9,959) |  | 2,674 (3,199) |  | 3,386 (5,495) |  |
| Acres Hay land owned | 133 (358) |  | 67 (191) |  | 122 (438) |  |
| Acres Pastureland owned | 450 (1,680) |  | 79 (221) |  | 480 (2,823) |  |
| Proportion of Acres Under Crops |  |  |  |  |  |  |
| Canola | 33% (21%) | 13.5% | 34% (15%) | 15.0% | 35% (17%) | 15.0% |
| Spring wheat | 32% (21%) | 12.5% | 30% (15%) | 13.3% | 28% (20%) | 9.1% |
| Barley | 19% (20%) | 0.5% | 5% (8%) | 2.3% | 10% (15%) | 1.2% |
| Oats | 5% (18%) | 1.8% | 7% (13%) | 2.1% | 4% (11%) | 2.0% |
| Peas | 5% (8%) | 6.0% | 2% (5%) | 1.1% | 6% (8%) | 4.3% |

**Table 2. Continued. Summary Statistics of Land Use Variables**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variable | **AB (N = 177)**  **Survey** | **AB**  **StatsCan** | **MB (N = 102)**  **Survey** | **MN**  **StatsCan** | **SK (N = 178)**  **Survey** | **SK**  **StatsCan** |
|  | *Mean (SD)* |  | *Mean (SD)* |  | *Mean (SD)* |  |
| Lentil | 1% (5%) | 1.0% | 0 (0) | 0.1% | 7% (12%) | 7.0% |
| Corn | 1 % (4%) | 7.5% | 5% (10%) | 2.0% | 1% (4%) | 3.4% |
| Rye | 0% (2%) |  | 1% (3%) |  | 1% (8%) |  |
| Beans | 0% (2%) | 0.2% | 2% (6%) | 0.7% | 0% (3%) |  |
| Flaxseed | 0% (2%) |  | 0% (2%) |  | 2% (5%) | 0.1% |
| Soybeans | 0% (0%) |  | 12% (13%) |  | 0% (3%) |  |
|  |  |  |  |  |  |  |

**Table 3a.** **Summary Statistics of Wetland Variables**

|  |  |  |  |
| --- | --- | --- | --- |
|  | AB (N=177) | MB (N=102) | SK (178) |
|  | *Mean (SD)* | *Mean (SD)* | *Mean (SD)* |
| Number of wetlands on farmland |  |  |  |
| Permanent | 12 (37) | 21 (79) | 15 (45) |
| Seasonal | 17 (58) | 15 (43) | 23 (59) |
| Wetland drainage decisions when n no drainage penalty |  |  |  |
| Percent wetlands converting | 42% (37%) | 41% (40%) | 42% (39%) |
| Number of wetlands converting | 7 (18) | 6 (13) | 10 (22) |
| Acres of wetlands converting | 39 (99) | 44 (130) | 68 (210) |
| Drainage cost of wetlands | 611 (1,161) | 581 (806) | 543 (1,087) |
|  |  |  |  |
|  | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* |
| Conserve wetlands if mandatory in sustainable ag. Certification (yes=1) | 72 (41%) | 42 (41%) | 75 (42%) |
| Have environmental farm plan? (yes=1) | 29 (16%) | 23 (23%) | 32 (18%) |
| Participated in gov’t BMP (yes=1) | 117 (66%) | 60 (59%) | 103 (58%) |
| Ownership of Drainage Equipment |  |  |  |
| Own equipment (yes =1) | 69 (39%) | 60 (59%) | 62 (35%) |
| Rent equipment (yes =1) | 20 (11%) | 14 (14%) | 13 (7.3%) |
| Do not rent or own (yes =1) | 88 (50%) | 28 (27%) | 103 (58%) |
| Own scrapper (yes =1) | 54 (31%) | 53 (52%) | 55 (31%) |
| Own track hoe (yes =1) | 23 (13%) | 18 (18%) | 19 (11%) |
| Own ditch machine (yes =1) | 21 (12%) | 16 (16%) | 14 (7.9%) |
| Own tile plow (yes =1) | 5 (2.8%) | 3 (2.9%) | 2 (1.1%) |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |

**Table 3b.** **Summary Statistics of Wetland Variables**

|  |  |  |  |
| --- | --- | --- | --- |
|  | AB (N=177) | MB (N=102) | SK (178) |
| Delayed seeding |  |  |  |
| Two out of ten | 28 (16%) | 15 (15%) | 38 (21%) |
| Four out of ten | 32 (18%) | 13 (13%) | 36 (20%) |
| Six out of ten | 36 (20%) | 18 (18%) | 39 (22%) |
| Eight out of ten | 47 (27%) | 19 (19%) | 31 (17%) |
| Ten out of ten | 5 (2.8%) | 6 (5.9%) | 5 (2.8%) |
| Do not farm seasonal wetlands | 29 (16%) | 31 (30%) | 29 (16%) |
| Wetland land quality compared to surrounding dryland |  |  |  |
| 25% above average | 27 (15%) | 10 (9.8%) | 31 (17%) |
| 10% above average | 43 (24%) | 11 (11%) | 49 (28%) |
| About average | 31 (18%) | 18 (18%) | 28 (16%) |
| 10% below average | 22 (12%) | 10 (9.8%) | 22 (12%) |
| 25% below average | 25 (14%) | 22 (22%) | 19 (11%) |

**Table 3c. Summary Statistics of Wetland Variables**

|  |  |  |  |
| --- | --- | --- | --- |
|  | AB (N=177) | MB (N=102) | SK (178) |
|  | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* |
| Rate factor that could influence you to drain wetland in absence of penalty |  |  |  |
| *Increased efficiency of operations* |  |  |  |
| Not important at all | 4 (2.3%) | 8 (7.8%) | 5 (2.8%) |
| Slightly important | 13 (7.3%) | 5 (4.9%) | 9 (5.1%) |
| Moderately important | 36 (20%) | 19 (19%) | 40 (22%) |
| Very important | 80 (45%) | 35 (34%) | 90 (51%) |
| Extremely important | 44 (25%) | 35 (34%) | 34 (19%) |
| *Land quality* |  |  |  |
| Not important at all | 3 (1.7%) | 3 (2.9%) | 5 (2.8%) |
| Slightly important | 12 (6.8%) | 0 (0%) | 7 (3.9%) |
| Moderately important | 39 (22%) | 21 (21%) | 53 (30%) |
| Very important | 86 (49%) | 46 (45%) | 76 (43%) |
| Extremely important | 37 (21%) | 32 (31%) | 37 (21%) |
| *Drainage cost* |  |  |  |
| Not important at all | 7 (4.0%) | 8 (7.8%) | 11 (6.2%) |
| Slightly important | 13 (7.3%) | 19 (19%) | 14 (7.9%) |
| Moderately important | 54 (31%) | 32 (31%) | 67 (38%) |
| Very important | 63 (36%) | 27 (26%) | 52 (29%) |
| Extremely important | 40 (23%) | 16 (16%) | 34 (19%) |
| *Effect on water quality* |  |  |  |
| Not important at all | 24 (14%) | 9 (8.8%) | 24 (13%) |
| Slightly important | 24 (14%) | 16 (16%) | 28 (16%) |
| Moderately important | 56 (32%) | 34 (33%) | 58 (33%) |
| Very important | 47 (27%) | 24 (24%) | 52 (29%) |
| Extremely important | 26 (15%) | 19 (19%) | 16 (9.0%) |

**Table 3d. Summary Statistics of Wetland Variables**

|  |  |  |  |
| --- | --- | --- | --- |
|  | AB (N=177) | MB (N=102) | SK (178) |
|  | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* |
| *Effect on nearby flooding* |  |  |  |
| Not important at all | 22 (12%) | 8 (7.8%) | 18 (10%) |
| Slightly important | 22 (12%) | 11 (11%) | 13 (7.3%) |
| Moderately important | 40 (23%) | 28 (27%) | 49 (28%) |
| Very important | 65 (37%) | 36 (35%) | 69 (39%) |
| Extremely important | 28 (16%) | 19 (19%) | 29 (16%) |
| *Effect on nearby land access* |  |  |  |
| Not important at all | 18 (10%) | 9 (8.8%) | 11 (6.2%) |
| Slightly important | 15 (8.5%) | 8 (7.8%) | 14 (7.9%) |
| Moderately important | 44 (25%) | 32 (31%) | 61 (34%) |
| Very important | 71 (40%) | 31 (30%) | 72 (40%) |
| Extremely important | 29 (16%) | 22 (22%) | 20 (11%) |
| *Delayed or prevented planting* |  |  |  |
| Not important at all | 9 (5.1%) | 6 (5.9%) | 6 (3.4%) |
| Slightly important | 22 (12%) | 8 (7.8%) | 23 (13%) |
| Moderately important | 49 (28%) | 36 (35%) | 68 (38%) |
| Very important | 67 (38%) | 32 (31%) | 59 (33%) |
| Extremely important | 30 (17%) | 20 (20%) | 22 (12%) |
| *Weed control* |  |  |  |
| Not important at all | 10 (5.6%) | 11 (11%) | 11 (6.2%) |
| Slightly important | 22 (12%) | 12 (12%) | 23 (13%) |
| Moderately important | 43 (24%) | 33 (32%) | 61 (34%) |
| Very important | 71 (40%) | 30 (29%) | 54 (30%) |
| Extremely important | 31 (18%) | 16 (16%) | 29 (16%) |
| *Wildlife habitat* |  |  |  |
| Not important at all | 18 (10%) | 16 (16%) | 23 (13%) |
| Slightly important | 45 (25%) | 17 (17%) | 37 (21%) |
| Moderately important | 49 (28%) | 35 (34%) | 63 (35%) |
| Very important | 44 (25%) | 20 (20%) | 38 (21%) |
| Extremely important | 21 (12%) | 14 (14%) | 17 (9.6%) |

**Table 3e. Summary Statistics of Wetland Variables**

|  |  |  |  |
| --- | --- | --- | --- |
|  | AB (N=177) | MB (N=102) | SK (178) |
|  | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* |
| Importance of Wetland Ecosystem Services (ESS) |  |  |  |
| *Water quality* |  |  |  |
| Very important | 15 (8.5%) | 13 (13%) | 19 (11%) |
| Slightly important | 26 (15%) | 9 (8.8%) | 25 (14%) |
| Not important | 54 (31%) | 30 (29%) | 52 (29%) |
| No opinion | 56 (32%) | 34 (33%) | 61 (34%) |
| *Flood control* |  |  |  |
| Very important | 27 (15%) | 12 (12%) | 25 (14%) |
| Slightly important | 28 (16%) | 7 (6.9%) | 19 (11%) |
| Not important | 45 (25%) | 30 (29%) | 55 (31%) |
| No opinion | 51 (29%) | 30 (29%) | 60 (34%) |
| *Erosion control* |  |  |  |
| Very important | 15 (8.5%) | 11 (11%) | 14 (7.9%) |
| Slightly important | 22 (12%) | 8 (7.8%) | 18 (10%) |
| Not important | 41 (23%) | 25 (25%) | 50 (28%) |
| No opinion | 62 (35%) | 36 (35%) | 72 (40%) |
| *Wildlife habitat* |  |  |  |
| Very important | 17 (9.6%) | 11 (11%) | 18 (10%) |
| Slightly important | 36 (20%) | 13 (13%) | 37 (21%) |
| Not important | 58 (33%) | 38 (37%) | 72 (40%) |
| No opinion | 45 (25%) | 25 (25%) | 32 (18%) |

**Table 3f.** **Summary Statistics of Wetland Variables**

|  |  |  |  |
| --- | --- | --- | --- |
|  | AB (N=177) | MB (N=102) | SK (178) |
|  | *Total Number (Percentage)* | *Total Number (Percentage)* | *Total Number (Percentage)* |
| Wetland trends in local area |  |  |  |
| *Number of wetlands* |  |  |  |
| Decreased a lot | 22 (12%) | 20 (20%) | 38 (21%) |
| Slightly decreased | 57 (32%) | 36 (35%) | 72 (40%) |
| No change | 76 (43%) | 43 (42%) | 60 (34%) |
| Slightly increase | 16 (9.0%) | 3 (2.9%) | 7 (3.9%) |
| Increased lot | 6 (3.4%) | 0 (0%) | 1 (0.6%) |
| *Water quality* |  |  |  |
| Decreased a lot | 16 (9.0%) | 13 (13%) | 26 (15%) |
| Slightly decreased | 33 (19%) | 23 (23%) | 55 (31%) |
| No change | 108 (61%) | 62 (61%) | 86 (48%) |
| Slightly increase | 18 (10%) | 4 (3.9%) | 10 (5.6%) |
| Increased lot | 2 (1.1%) | 0 (0%) | 1 (0.6%) |