**Table A1.** Organic seed prices (CAN$ kg-1) and seeding rate (kg ha-1).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **2011** | **2012** | **2013** | **2014** | **2015** | **Seeding rate\*** |
| Hard Red Spring Wheat | 0.37 | 0.44 | 0.52 | 0.74 | 0.53 | 121 |
| Flax |  | 1.04 |  | 1.20 |  | 47 |
| Mustard | 1.27 |  | 1.68 |  | 3.00 | 15 |
| Lentil | 0.77 |  | 0.54 |  | 0.88 | 192 |
| Field pea |  | 0.86 |  | 0.66 |  | 252 |
| Forage pea | 0.63 | 0.64 | 0.65 | 0.66 | 0.80 | 269 |

Sources:

\* Fernandez, M.R., Zentner, R.P., Schellenberg, M.P., Leeson, J.Y., Aladenola, O., McConkey, B.G., and St. Luce, M. 2019b. Grain yield and quality of organic crops grown under reduced tillage and diversified sequences. Agronomy Journal 111:793-804. doi:10.2134/agronj2018.01.0029

Hamm, W. and Hugh, M. 2015. Organic or conventional? You decide. The economic advantages of entering the organic grain market. Available at: http://www.pro-cert.org/economics/assets/organic\_or\_conventional-you\_decide\_2015\_by\_pro-cert.pdf

Organic Alberta. 2019. Organic market prices. Available at: https://organicalberta.org/grow-organics/organic-resources/organic-price-quotes (accessed 20 Aug. 2019).

**Table A2.** Organic seed cost (CAN$ ha-1).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **2011** | **2012** | **2013** | **2014** | **2015** |  |
| Hard Red Spring Wheat | 44.81 | 53.78 | 62.74 | 89.63 | 64.13 |  |
| Flax |  | 48.88 |  | 56.40 |  |  |
| Mustard | 19.61 |  | 25.93 |  | 46.20 |  |
| Lentil | 147.46 |  | 103.22 |  | 168.96 |  |
| Field pea |  | 217.05 |  | 166.12 |  |  |
| Forage pea | 169.47 | 172.16 | 174.85 | 177.54 | 215.20 |  |

Source: Estimated from data in Table A1.

**Table A3.** Conventional grain prices (CAN$ kg-1).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Crop** | **2011** | **2012** | **2013** | **2014** | **2015** |  |
| Hard Red Spring Wheat | 0.27 | 0.26 | 0.20 | 0.21 | 0.21 |  |
| Brown Flax | 0.50 | 0.52 | 0.50 | 0.48 | 0.52 |  |
| Lentil | 0.60 | 0.42 | 0.42 | 0.72 | 0.88 |  |
| Yellow Mustard | 0.59 | 0.71 | 0.78 | 0.73 | 0.74 |  |
| Yellow pea | 0.28 | 0.32 | 0.30 | 0.24 | 0.31 |  |

Source:

Food and Agriculture Organization of the United Nations. 1999. Guidelines for the production, processing, labelling and marketing of organically produced foods. Available at: http://www.fao.org/unfao/bodies/COAG/COAG15/X0075E.htm#P86\_4004 (accessed 15 Aug. 2019).

**Table A4.** Calculation of fuel and labour costs (CAN$ per hectare).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | Seeder-Air Drill | Cultivator | Tandem Double Disk | Rotary Hoe | Rodweeder | 3-Gang Mower | Combine | 3/4 Ton Pickup\*\* | Total L ha-1 | | Fuel price CAN$ L-1 | | Total fuel CAN$ ha-1 | Labour hr ha-1 | Labourwage hr-1 | | Total labour CAN$ ha-1 | |
| Labour (hrs per operation\* per ha) | | | 0.24 | 0.24 | 0.272 | 0.272 | 0.338 | 0.272 | 0.136 | 0.136 |  | |  | |  |  |  | |  | |
|  | |  |  |  |  |  |  |  |  |  |  | |  | |  |  |  | |  | |
| Fuel (liters per operation\* per ha) | | | 6.175 | 5.55 | 8.64 | 1.85 | 1.85 | 1.85 | 13.6 | 7.41 |  | |  | |  |  |  | |  | |
|  | |  | Number of times each machinery was used in field operations during each growing season | | | | | | | |  |  | |  | |  | |  | |  |
| 2011 | | HS a | 1 | 1 | 1 |  |  |  | 1 | 1 | 41.38 | | 1.20 | | 49.65 | 1.02 | 16.81 | | 17.21 | |
| 2011 | | LS | 1 |  |  | 1 |  | 1 | 1 | 1 | 30.89 | | 1.20 | | 37.06 | 1.06 | 16.81 | | 17.75 | |
| 2011 | | HD | 1 | 1 | 1 |  |  |  | 1 | 1 | 41.38 | | 1.20 | | 49.65 | 1.02 | 16.81 | | 17.21 | |
| 2011 | | LD | 1 |  |  | 1 |  | 1 | 1 | 1 | 30.89 | | 1.20 | | 37.06 | 1.06 | 16.81 | | 17.75 | |
| 2012 | | HS | 1 | 1 | 1 |  |  |  | 1 | 1 | 41.38 | | 1.22 | | 50.48 | 1.02 | 17.70 | | 18.12 | |
| 2012 | | LS | 1 |  |  | 1 |  | 2 | 1 | 1 | 32.74 | | 1.22 | | 39.94 | 1.33 | 17.70 | | 23.51 | |
| 2012 | | HD | 1 | 1 | 1 |  |  |  | 1 | 1 | 41.38 | | 1.22 | | 50.48 | 1.02 | 17.70 | | 18.12 | |
| 2012 | | LD | 1 |  |  | 1 |  | 2 | 1 | 1 | 32.74 | | 1.22 | | 39.94 | 1.33 | 17.70 | | 23.51 | |
| 2013 | | HS | 1 | 1 | 3 |  |  |  | 1 | 1 | 58.66 | | 1.19 | | 69.80 | 1.57 | 17.70 | | 27.75 | |
| 2013 | | LS | 1 | 1 |  | 1 |  | 2 | 1 | 1 | 38.29 | | 1.19 | | 45.56 | 1.57 | 17.70 | | 27.75 | |
| 2013 | | HD | 1 | 1 | 3 |  |  |  | 1 | 1 | 58.66 | | 1.19 | | 69.80 | 1.57 | 17.70 | | 27.75 | |
| 2013 | | LD | 1 | 1 |  | 1 |  | 2 | 1 | 1 | 38.29 | | 1.19 | | 45.56 | 1.57 | 17.70 | | 27.75 | |
| 2014 | | HS | 1 | 1 | 2 |  |  |  | 1 | 1 | 50.02 | | 1.21 | | 60.52 | 1.30 | 18.05 | | 23.39 | |
| 2014 | | LS | 1 | 1 |  |  |  | 2 | 1 | 1 | 36.44 | | 1.21 | | 44.09 | 1.30 | 18.05 | | 23.39 | |
| 2014 | | HD | 1 | 1 | 2 |  |  |  | 1 | 1 | 50.02 | | 1.21 | | 60.52 | 1.30 | 18.05 | | 23.39 | |
| 2014 | | LD | 1 | 1 |  |  |  | 2 | 1 | 1 | 36.44 | | 1.21 | | 44.09 | 1.30 | 18.05 | | 23.39 | |
| 2015 | | HS | 1 | 2 | 2 |  |  |  | 1 | 1 | 55.57 | | 1.00 | | 55.57 | 1.54 | 18.58 | | 28.54 | |
| 2015 | | LS | 1 | 1 |  |  | 1 | 2 | 1 | 1 | 38.29 | | 1.00 | | 38.29 | 1.63 | 18.58 | | 30.36 | |
| 2015 | | HD | 1 | 2 | 2 |  |  |  | 1 | 1 | 55.57 | | 1.00 | | 55.57 | 1.54 | 18.58 | | 28.54 | |
| 2015 | | LD | 1 | 1 |  |  | 1 | 2 | 1 | 1 | 38.29 | | 1.00 | | 38.29 | 1.63 | 18.58 | | 30.36 | |

\*The width of the machinery and a speed of 5 MPH was used to find out how many ha were covered in an hour.

\*\* Manitoba Agriculture (2018)

a HS: high tillage simplified rotation, HD: high tillage diversified rotation, LS: low tillage simplified rotation, LD: low tillage diversified rotation. .

Sources:

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