This Supplementary File accompanies the manuscript,

Craig, H., Wilson, T., Magill, C., Stewart, C. and Popovich, B. (2021) “Agriculture and forestry impact assessment for tephra fall hazard: fragility function development and New Zealand scenario application”, *Volcanica*, 4(2). pp. 345–367. doi: 10.30909/vol.04.02.345367.

Craig et al. (2021) should be cited if these data are used independently.

Supplementary Material 4: Tables estimating the potential financial losses (in NZD (DairyNZ, 2020; HorticultureNZ, 2019; MAF, 2011)) in the first year for a A) October 1995 Ruapehu at the October vulnerability level; B) June 1996 Ruapehu at the June vulnerability level; and a C) ~1314 AD Kaharoa eruption at a time of full vulnerability.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **A) 1995 Ruapehu** | **Cereal** | **Non-tree fruit** | **Tree fruit** | **Root vegetables** | **Leafy vegetables** | **Viticul-ture** | **Non-dairy pastoral** | **Dairying** | **Forestry\*** |
| **IS** | **Production value per annum per hectare ($)** | 1,000 | 1,900 | 4,400 | 1,500 | 3,500 | 4,000 | 800 | 2,292 | 12,500 |
| 0 | Production loss ($) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 183,530 | 1,028,534 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total losses ($) | 0 | 0 | 0 | 0 | 16,100 | 0 | 183,531 | 1,028,535 | 0 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **B) 1996 Ruapehu** | **Cereal** | **Non-tree fruit** | **Tree fruit** | **Root vegetables** | **Leafy vegetables** | **Viticul-ture** | **Non-dairy pastoral** | **Dairying** | **Forestry\*** |
| **IS** | **Production value per annum per hectare ($)** | 1,000 | 1,900 | 4,400 | 1,500 | 3,500 | 4,000 | 800 | 2,292 | 12,500 |
| 0 | Production loss ($) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1,405 | 0 | 0 | 0 | 0 | 4,582 | 867,491 | 817,776 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total losses ($) | 1,405 | 0 | 0 | 0 | 102,655 | 4,583 | 867,492 | 817,777 | 0 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **C) ~1314 AD****Kaharoa** | **Cereal** | **Non-tree fruit** | **Tree fruit** | **Root vege-tables** | **Leafy vege-tables** | **Viticul-ture** | **Non-dairy pastoral** | **Dairying** | **Forestry\*** |
| **IS** | **Production value per annum per hectare ($)** | 1,000 | 1,900 | 4,400 | 1,500 | 3,500 | 4,000 | 800 | 2,292 | 12,500 |
| 0 | Production loss ($) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 0 | 8,185,336 | 0 | 0 | 883,550 | 67,677,721 | 57,204,784 | 0 |
| 2 | 0 | 198,162 | 0 | 341,631 | 0 | 0 | 154,925,066 | 42,416,767 | 0 |
| 3 | 2,928,414 | 359,484 | 788,460 | 26,418 | 0 | 52,896 | 16,661,837 | 0 | 896,250 |
| 4 | 1,851,563 | 352,607 | 0 | 50,594 | 2,062,150 | 10,682 | 13,269,317 | 37,421,873 | 0 |
| Total losses ($) | 4,779,979 | 910,254 | 8,973,797 | 418,645 | 2,062,150 | 947,129 | 252,533,942 | 137,043,426 | 896,250 |