**Table 2.** Predictive accuracy of selected machine learning regression models used to estimate the number of active constituents applied by hop growers in Oregon for powdery mildew (caused by *Podosphaera macularis*) and the annual cost of those active constituents

| | Annual cost[a] | | | | | | Active constituents | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Model** | **MAE** | **MSE** | **RMSE** | **$R^2$ training data** | **$R^2$ test data** | **Cross-validation** | **MAE** | **MSE** | **RMSE** | **$R^2$ training data** | **$R^2$ test data** | **Cross-validation** |
| Ridge regression | 199.47 | 263037.2 | 512.87 | 0.42 | -3.36 | -1.47 | 1.54 | 4.99 | 2.23 | 0.89 | 0.36 | 0.53 |
| LASSO regression | 176.66 | 68648.89 | 262.01 | 0.56 | -0.14 | -1.34 | 2.00 | 6.74 | 2.60 | 0.29 | 0.13 | -0.05 |
| Decision tree regression | 204.49 | 78739.20 | 280.61 | 0.78 | -0.31 | 0.01 | 1.67 | 6.52 | 2.55 | 0.95 | 0.16 | 0.42 |
| Random forest regression | 166.28 | 52766.63 | 229.71 | 0.72 | 0.13 | 0.24 | 1.41 | 3.79 | 1.95 | 0.91 | 0.51 | 0.64 |

[a] MAE is mean absolute error, MSE is mean squared error, RMSE is root mean squared error, and $R^2$ is the coefficient of determination.