**Table 4.1 Shows performance measures of four models on the three commodities.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Model | Commodity | Input features | MSE(10-4) | MAE | DA (%) | T(s) |
| RNN | Coffee | DOHCL | 5.3 | 0.15 | 89 | 79 |
| DOHCL+CTI | 3.0 | 0.05 | 89 | 57.4 |
| DOHCL+CTI+News | 3.9 | 0.04 | 89 | 36.4 |
| Sesame | DOHCL | 2.0 | 0.31 | 55 | 73 |
| DOHCL+CTI | 1.8 | 0.05 | 53 | 15.9 |
| DOHCL+CTI+News | 1.8 | 0.025 | 78 | 75 |
| Haricot beans | DOHCL | 1.4 | 0.46 | 70 | 42.3 |
| DOHCL+CTI | 1.5 | 0.055 | 51 | 41.8 |
| DOHCL+CTI+News | 1.5 | 0.02 | 71 | 76 |
| LSTM | coffee | DOHCL | 1.2 | 0.15 | 75 | 58.8 |
| DOHCL+CTI | 1.6 | 0.81 | 87 | 37.1 |
| DOHCL+CTI+News | 0.96 | 0.11 | 88 | 58.3 |
| Sesame | DOHCL | 1.7 | 0.32 | 52 | 42.8 |
| DOHCL+CTI | 1.43 | 0.21 | 51 | 41.3 |
| DOHCL+CTI+News | 1.49 | 0.11 | 52 | 65 |
| Haricot Bean | DOHCL | 1.2 | 0.46 | 70 | 37.5 |
| DOHCL+CTI | 1.3 | 0.41 | 62 | 32.6 |
| DOHCL+CTI+News | 2.4 | 0.01 | 61 | 42.3 |
| CNN | Coffee | DOHCL | 3.0 | 0.12 | 75 | 21 |
| DOHCL+CTI | 3.7 | 0.56 | 88 | 20 |
| DOHCL+CTI+News | 4.0 | 0.012 | 89 | 21 |
| Sesame | DOHCL | 1.7 | 0.52 | 54 | 24 |
| DOHCL+CTI | 2.4 | 0.91 | 58 | 23.9 |
| DOHCL+CTI+News | 1.8 | 0.041 | 56 | 23.1 |
| Haricot bean | DOHCL | 1.2 | 0.72 | 50 | 36.5 |
| DOHCL+CTI | 1.7 | 0.35 | 40 | 35.7 |
| DOHCL+CTI+News | 1.06 | 0.125 | 66 | 37.6 |
| CNN-LSTM | Coffee | DOHCL | 2.5 | 0.95 | 68 | 55.2 |
| DOHCL+CTI | 5.3 | 2.01 | 89 | 40.2 |
| DOHCL+CTI+News | 4.6 | 0.91 | 88 | 40.6 |
| Sesame | DOHCL | 3.3 | 0.12 | 49 | 46.3 |
| DOHCL+CTI | 3.5 | 0.115 | 50 | 41 |
| DOHCL+CTI+News | 2.4 | 0.11 | 50 | 40.3 |
| Haricot bean | DOHCL | 1.1 | 0.56 | 71 | 40.3 |
| DOHCL+CTI | 1.4 | 0.49 | 71 | 55.4 |
| DOHCL+CTI+News | 1.1 | 0.15 | 71 | 40.6 |