

Supplementary Table S1

Supplementary Table S1: Results of agricultural commodity price forecasting

(a) 14-day horizon

Dataset	Window size	Potato				Lettuce				Onion				Cucumber			
		Stacked LSTM (Single)	Stacked LSTM (Multi)	T-GCN	StemGNN	Stacked LSTM (Single)	Stacked LSTM (Multi)	T-GCN	StemGNN	Stacked LSTM (Single)	Stacked LSTM (Multi)	T-GCN	StemGNN	Stacked LSTM (Single)	Stacked LSTM (Multi)	T-GCN	StemGNN
r_{a0}	15	11.654	13.662	11.567	10.294	32.224	38.963	39.914	33.731	12.989	18.458	13.074	13.468	27.510	27.937	30.104	28.016
	30	10.718	13.090	12.623	12.605	32.175	43.165	39.813	33.821	13.089	16.618	12.716	13.689	27.254	27.518	30.044	27.939
	45	10.771	14.788	12.528	10.797	31.653	41.441	40.292	31.449	12.609	21.121	12.771	17.032	28.114	29.817	30.064	28.118
	60	10.771	13.572	13.315	11.293	31.084	35.131	40.831	34.895	12.979	19.282	12.976	14.946	28.128	30.677	30.355	29.707
r_{a7}	15	9.624	11.368	10.059	9.701	30.801	29.428	35.026	30.852	12.240	13.089	11.722	12.005	26.042	27.939	27.058	25.471
	30	9.600	12.595	11.360	10.383	28.721	40.076	36.137	30.593	12.384	23.377	11.797	12.028	25.996	26.394	27.370	25.409
	45	10.199	16.009	12.081	9.874	28.603	65.928	37.064	29.025	12.396	17.618	11.825	13.598	25.980	26.846	27.535	27.535
	60	9.537	12.817	11.464	9.159	28.618	28.943	36.354	30.318	12.920	18.418	11.839	12.127	25.833	28.029	27.404	26.825
r_{a14}	15	8.411	10.801	8.629	9.970	26.347	25.801	29.979	24.567	11.597	18.241	10.872	11.364	23.592	25.636	23.103	21.479
	30	8.686	9.596	9.358	8.466	24.835	31.763	29.370	25.115	11.729	15.684	9.861	10.837	23.032	22.496	22.927	20.781
	45	8.608	12.582	9.942	7.553	24.973	45.064	29.862	23.909	12.399	16.722	10.055	13.608	22.904	27.222	22.902	21.387
	60	8.497	11.571	9.669	8.178	25.205	43.648	31.419	24.446	11.424	22.549	9.906	12.717	23.189	26.770	23.283	22.524
r_{a21}	15	8.396	10.214	6.764	7.288	22.039	26.442	21.894	21.256	10.958	14.635	7.826	9.117	18.938	18.475	18.103	17.756
	30	7.583	11.151	7.287	6.611	21.842	33.344	21.475	18.118	11.779	11.167	7.581	8.929	19.372	22.379	17.507	16.706
	45	7.416	14.615	7.590	7.091	23.345	36.094	21.298	16.889	10.423	17.620	7.592	9.531	19.107	20.041	17.328	15.557
	60	7.284	9.690	7.634	7.178	22.502	31.907	21.216	17.866	10.789	14.027	7.571	10.530	19.483	24.983	16.837	16.212
r_{a28}	15	7.056	8.911	4.990	6.173	19.948	27.695	16.405	17.245	13.179	11.747	5.858	7.989	15.906	18.466	14.503	14.122
	30	7.002	9.926	7.401	5.439	19.651	30.566	18.256	15.440	9.719	8.807	6.612	8.052	16.579	18.606	15.341	14.585
	45	6.897	7.917	5.994	5.344	19.750	27.069	16.391	15.244	10.221	15.589	5.833	8.674	15.481	18.374	14.365	15.642
	60	7.205	10.371	7.596	5.286	19.773	30.502	17.954	13.933	9.235	14.113	6.891	8.882	15.761	18.395	15.138	13.073

(b) 7-day horizon

Dataset	Window size	Potato				Lettuce				Onion				Cucumber			
		Stacked LSTM (Single)	Stacked LSTM (Multi)	T-GCN	StemGNN	Stacked LSTM (Single)	Stacked LSTM (Multi)	T-GCN	StemGNN	Stacked LSTM (Single)	Stacked LSTM (Multi)	T-GCN	StemGNN	Stacked LSTM (Single)	Stacked LSTM (Multi)	T-GCN	StemGNN
r_{a0}	15	8.918	11.494	9.191	8.825	25.278	27.026	29.588	25.791	8.643	11.492	10.264	10.851	23.107	22.553	24.348	22.559
	30	9.125	10.799	10.010	10.072	24.547	31.972	29.601	25.358	9.134	13.420	9.542	11.291	22.517	23.538	24.612	22.036
	45	8.781	10.170	9.725	9.429	24.457	27.982	29.243	25.166	8.910	12.288	9.474	13.205	22.612	23.187	24.386	23.881
	60	8.876	11.867	9.888	9.761	25.321	33.122	29.541	26.033	9.498	14.826	9.573	11.735	23.230	22.623	24.555	23.575
r_{a7}	15	7.531	8.279	7.330	7.699	20.203	31.271	23.556	20.801	8.502	9.243	8.323	9.536	19.812	18.215	19.942	17.749
	30	7.167	8.983	8.528	8.583	20.150	23.426	24.155	21.177	7.953	9.899	8.342	10.330	20.322	17.559	20.040	16.523
	45	7.408	9.022	8.717	7.401	20.364	20.753	24.660	20.454	8.459	10.431	8.315	11.849	18.778	16.929	20.235	18.760
	60	7.334	9.045	8.433	7.366	20.062	30.532	24.874	19.964	8.325	11.130	8.200	9.721	19.770	21.441	20.738	19.028
r_{a14}	15	5.871	6.527	4.584	6.181	16.355	12.346	13.774	15.717	7.000	7.269	4.869	7.688	14.532	11.585	12.442	13.278
	30	5.870	5.374	5.246	5.423	15.328	18.336	14.457	14.237	7.148	9.380	4.981	7.064	15.189	13.192	12.183	11.113
	45	5.509	6.418	5.083	5.077	14.885	18.565	13.915	12.730	6.556	7.630	4.793	9.637	14.932	11.850	11.722	11.687
	60	5.351	5.951	5.128	5.133	16.189	19.629	14.633	13.973	7.951	7.676	5.002	7.658	15.325	12.822	12.300	12.560
r_{a21}	15	4.424	4.171	3.275	4.041	13.005	13.187	10.146	11.718	6.155	8.567	3.575	5.912	11.128	9.788	8.861	10.058
	30	4.496	7.748	3.144	4.161	13.116	19.936	9.406	9.886	6.162	11.451	3.310	5.748	11.466	10.858	8.569	8.504
	45	4.634	4.222	3.295	3.849	13.470	12.294	9.680	10.065	5.748	11.124	3.460	7.545	11.037	11.495	8.651	8.779
	60	4.706	5.970	3.834	4.347	12.490	16.613	9.948	12.061	5.606	6.921	3.619	6.221	11.261	10.152	8.505	9.049
r_{a28}	15	3.827	4.170	2.543	3.388	11.129	10.127	7.551	9.724	5.606	7.721	2.530	4.878	9.190	7.172	6.946	8.205
	30	4.529	5.139	3.168	3.696	10.876	9.172	8.139	8.639	5.259	8.289	2.949	4.545	9.278	7.612	7.482	8.451
	45	3.899	4.100	2.644	3.332	10.890	18.791	7.489	8.978	5.691	6.297	2.572	7.629	9.934	7.924	6.997	8.581
	60	3.859	3.977	2.659	3.476	11.369	7.451	7.593	10.046	5.005	7.922	2.582	4.894	9.276	7.922	7.017	7.670