

Supplementary Table S1. Visible Near Infrared spectrometer. Neural network architectures and correlation coefficients for the developed ANN models. The best architecture for each parameter was highlighted in bold.

Neural Network Topologies (input-hidden-output)		Activation Function		Training Set	Test Set
		Hidden Neurons	Output Neurons	Correlation coefficient	Correlation coefficient
FF	MLP (204–11–1)	Logistic	Identity	0.8258	0.8989
	MLP (204–21–1)	Logistic	Logistic	0.6944	0.6546
	MLP (204–14–1)	Tanh	Logistic	0.6149	0.5642
	MLP (204–11–1)	Exp	Exp	0.7011	0.6620
	MLP (204–16–1)	Tanh	Exp	0.5951	0.5525z
TSS	MLP (204–22–1)	Exp	Tanh	0.9834	0.9793
	MLP (204–9–1)	Tanh	Logistic	0.9653	0.9278
	MLP (204–8–1)	Tanh	Tanh	0.9752	0.9209
	MLP (204–19–1)	Tanh	Identity	0.9814	0.9230
	MLP (204–11–1)	Exp	Tanh	0.9884	0.9193
TA	MLP (204–16–1)	Identity	Identity	0.9864	0.9365
	MLP (204–9–1)	Identity	Exp	0.9710	0.9216
	MLP (204–9–1)	Identity	Logistic	0.9832	0.9273
	MLP (204–19–1)	Identity	Identity	0.9867	0.9358
	MLP (204–22–1)	Identity	Exp	0.9707	0.9221
DM	MLP (204–19–1)	Exp	Exp	0.9834	0.9731
	MLP (204–21–1)	Tanh	Exp	0.8869	0.8743
	MLP (204–22–1)	Tanh	Exp	0.9059	0.9052
	MLP (204–23–1)	Logistic	Exp	0.9094	0.9188
	MLP (204–20–1)	Exp	Logistic	0.8595	0.8941

Legend: MLP = multilayer perceptron; Tanh = hyperbolic tangent function; Exp = exponential function; FF = firmness (N); TSS = total soluble solid content (g 100 g⁻¹ FW); TA = titratable acidity (mEq L⁻¹); DM = dry matter (g 100 g⁻¹ FW).

Supplementary Table S2. Short Wave Infrared spectrometer. Neural network architectures and correlation coefficients for the developed ANN models. The best architecture for each parameter was highlighted in bold.

Neural Network Topologies (input-hidden-output)		Activation Function		Training Set	Test Set
		Hidden Neurons	Output Neurons	Correlation coefficient	Correlation coefficient
FF	MLP (224–10–1)	Logistic	Identity	0.9654	0.9055
	MLP (224–25–1)	Tanh	Identity	0.9611	0.8282
	MLP (224–23–1)	Identity	Logistic	0.9711	0.8995
	MLP (224–9–1)	Identity	Identity	0.9780	0.8162
	MLP (224–10–1)	Tanh	Logistic	0.9214	0.8870
TSS	MLP (224–11–1)	Logistic	Identity	0.9823	0.9476
	MLP (224–14–1)	Identity	Tanh	0.9754	0.9401
	MLP (224–14–1)	Identity	Identity	0.9768	0.9458
	MLP (224–10–1)	Logistic	Tanh	0.9699	0.9400
	MLP (224–13–1)	Logistic	Identity	0.9768	0.9422
TA	MLP (224–19–1)	Logistic	Exp	0.9935	0.9762
	MLP (224–18–1)	Logistic	Exp	0.9605	0.9041
	MLP (224–22–1)	Tanh	Identity	0.9484	0.9036
	MLP (224–13–1)	Tanh	Logistic	0.9719	0.9022
	MLP (224–20–1)	Logistic	Identity	0.9581	0.9272
DM	MLP (224–11–1)	Logistic	Exp	0.9905	0.9612
	MLP (224–25–1)	Logistic	Tanh	0.9954	0.9323
	MLP (224–21–1)	Logistic	Tanh	0.9682	0.9585
	MLP (224–19–1)	Tanh	Identity	0.9955	0.9440
	MLP (224–16–1)	Tanh	Tanh	0.9702	0.9584

Legend: MLP = multilayer perceptron; Tanh = hyperbolic tangent function; Exp = exponential function; FF = firmness (N); TSS = total soluble solid content (g 100 g⁻¹ FW); TA = titratable acidity (mEq L⁻¹); DM = dry matter (g 100 g⁻¹ FW).