Detection of Bacterial Leaf Spot Disease in Sesame (*Sesamum indicum* L.) Using a U-Net Autoencoder

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Supplementary Information:

Table S1. Classification accuracy by spectral band

Band	Accuracy	Band	Accuracy	Band	Accuracy	Band	Accuracy
B1	0.8353	B13	0.8588	B25	0.6824	B37	0.6471
B2	0.8118	B14	0.8824	B26	0.7059	B38	0.6353
B3	0.8235	B15	0.8941	B27	0.6353	B39	0.6353
B4	0.8706	B16	0.8941	B28	0.6471	B40	0.6588
B5	0.8824	B17	0.8941	B29	0.6235	B41	0.6471
B6	0.8588	B18	0.8941	B30	0.6353	B42	0.6353
B7	0.8941	B19	0.9059	B31	0.6353	B43	0.6588
B8	0.8706	B20	0.8824	B32	0.6353	B44	0.6588
B9	0.8824	B21	0.8588	B33	0.6471	B45	0.6824
B10	0.8588	B22	0.8706	B34	0.6588	B46	0.6471
B11	0.8353	B23	0.9059	B35	0.6824		
B12	0.8118	B24	0.8353	B36	0.6235		

Table S2. Classification f1-score by spectral band

Band	F1-score	Band	F1-score	Band	F1-score	Band	F1-score
B1	0.8654	B13	0.8776	B25	0.7429	B37	0.717
B2	0.8462	B14	0.8864	B26	0.6988	B38	0.7304
B3	0.8387	B15	0.9011	B27	0.7304	B39	0.7156
B4	0.8817	B16	0.8989	B28	0.6939	B40	0.7387
B5	0.898	B17	0.9053	B29	0.6735	B41	0.717
B6	0.8776	B18	0.9072	B30	0.6931	B42	0.7048
B7	0.9072	B19	**0.9167**	B31	0.6931	B43	0.7434
B8	0.8706	B20	0.9	B32	0.6869	B44	0.7434
B9	0.8864	B21	0.875	B33	0.717	B45	0.7379
B10	0.8636	B22	0.8866	B34	0.7238	B46	0.7458
B11	0.8511	B23	**0.913**	B35	0.7429		
B12	0.8261	B24	0.8511	B36	0.6667		

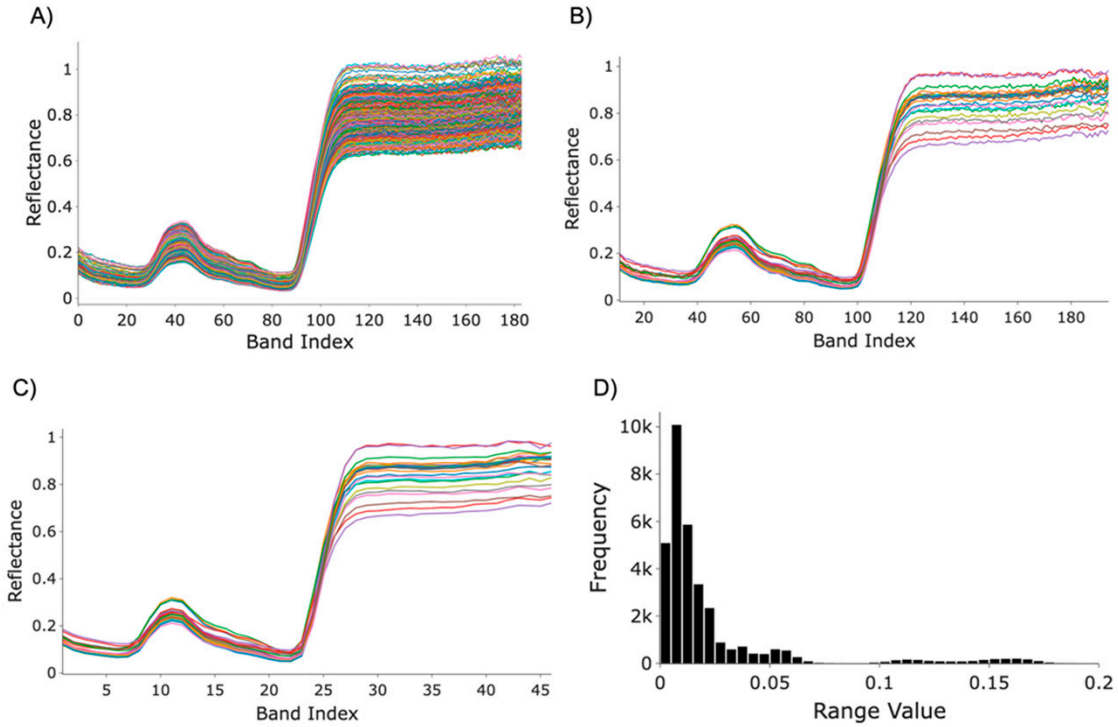


Figure S1. Reflectance graph along with the range of values of reflectance of a random sample image. (A) Reflectance of 184 bands; B11 to B194 including all the pixels number, (B) Reflectance of 184 bands; B11 to B194 after some pixels were removed for better visualization, (C) Reflectance of 46 bands after averaging four consecutive bands, and (D) Frequency distribution of reflectance range values across all bands. Since each band possesses a unique reflectance range (see Figure S1 (A), S1 (B), S1 (C)), this plot helps identify any bands with anomalous (outlier) range characteristics. Notably, 94% of the bands exhibited a range value of less than 0.1. This observation provides a meaningful perspective for practical analysis in our field.