

Table S1. Recent studies focusing on the detection of *Fusarium* Head Blight (FHB) in wheat structures through RGB and/or Hyperspectral images combined with different classification approaches.

REFERENCE	MATERIAL USED	IMAGE TYPE	CLASSIFICATION APPROACH	PERFORMANCE METRIC
Jirsa & Polisenska (2011)	Wheat kernels	RGB images	Linear discriminant analysis	Accuracy of 85%.
Gu et al. (2020)	Wheat ears	RGB images	AlexNet (a (DCNN)	Accuracy of ca. 93%.
Qiu et al. (2019)	Wheat spikes/canopy	RGB images	Mask RCNN model	Average precision of 92.01%
Moghimi et al. (2019)	Wheat spikes	Hyperspectral images	Density estimator with Gaussian kernel	>90% classification accuracy
Liang et al. (2020)	Wheat kernels and flour	Hyperspectral images	Support vector machine (SVM) and sparse auto-encoder (SAE) network	Prediction accuracy of 96-100%
Zhang et al. (2020)	Wheat head	Hyperspectral images	2D-CDD network	R <sup>2</sup> = 0.97 and RMSE = 3.78
Nadimi et al. (2021)	Wheat grain	NIR hyperspectral images	k-nearest neighbour (kNN)-based classifiers	85% accuracy and 92% sensitivity
Rangarajan et al. (2022)	Wheat canopy	Hyperspectral images	8 CNN models	F1 score of 100% and prediction score of 1 (with the DarkNet 19 model)
Mustafa et al. (2022)	Wheat canopy	Hyperspectral images	5 Machine learning classifiers (MLC)	100% classification accuracy with Random Forest (RF)
Erkinbaev et al. (2022)	Wheat kernels	Hyperspectral images	Partial least square discriminant analysis (PLSDA)	Overall classification accuracies of 85-94%

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The present study (Bernardes et al.)	Wheat seeds	RGB images	6 CNN models	Classification accuracies $\geq$ 97% with the two best models
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\* References are presented in the main text.