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Model Report: Random Forest (Pixel-Level)
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Generated: 2026-02-09 10:03:55
Script: /home/mmann1123/Documents/github/South_Africa_Crop_Comp/deep_learn/src/Classical Machine Learning/pi

Data Split:
  train_count: 6058481
  test_count: 1484625
  random_seed: 42
  split_method: fid-wise

Metrics (test set):
  Accuracy:      0.6931
  Cohen Kappa:   0.5922
  F1 Weighted:   0.6828
  F1 Macro:      0.6424

Hyperparameters:
  bootstrap: True
  ccp_alpha: 0.0
  class_weight: None
  criterion: gini
  max_depth: None
  max_features: sqrt
  max_leaf_nodes: None
  max_samples: None
  min_impurity_decrease: 0.0
  min_samples_leaf: 1
  min_samples_split: 2
  min_weight_fraction_leaf: 0.0
  monotonic_cst: None
  n_estimators: 20
  n_jobs: 4
  oob_score: False
  random_state: None
  verbose: 0
  warm_start: False
```
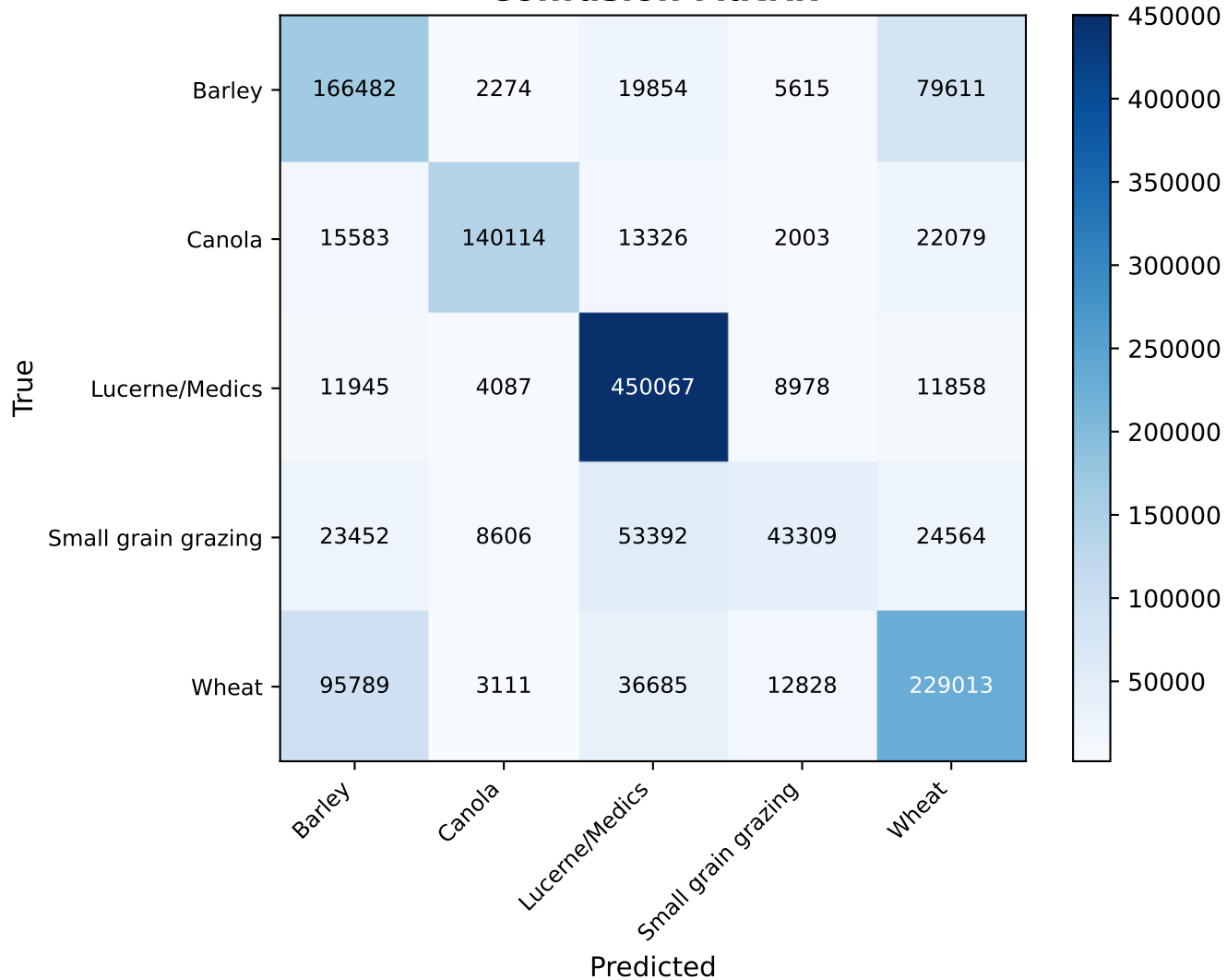
Per-Class Metrics

Class	Precision	Recall	F1-Score	Support
Barley	0.531	0.608	0.567	273836
Canola	0.886	0.726	0.798	193105
Lucerne/Medics	0.785	0.924	0.849	486935
Small grain grazing	0.595	0.282	0.383	153323
Wheat	0.624	0.607	0.615	377426

Confusion Matrix

	Barley	Canola	Lucerne/Medics	Small grain grazing	Wheat
Barley	166482	2274	19854	5615	79611
Canola	15583	140114	13326	2003	22079
Lucerne/Medics	11945	4087	450067	8978	11858
Small grain grazing	23452	8606	53392	43309	24564
Wheat	95789	3111	36685	12828	229013

Top 20 Feature Importances