

## Model Report: 3D CNN Patch-Level

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Script: /home/mmann1123/Documents/github/South\_Africa\_Crop\_Comp/deep\_learn/src/Deep Learning/Patch Level/3D

### Data Split:

train\_count: 10996  
test\_count: 2558  
random\_seed: 42  
split\_method: field-based (patch-level)

### Metrics (test set):

Accuracy: 0.7467  
Cohen Kappa: 0.6719  
F1 Weighted: 0.7377  
F1 Macro: 0.6936

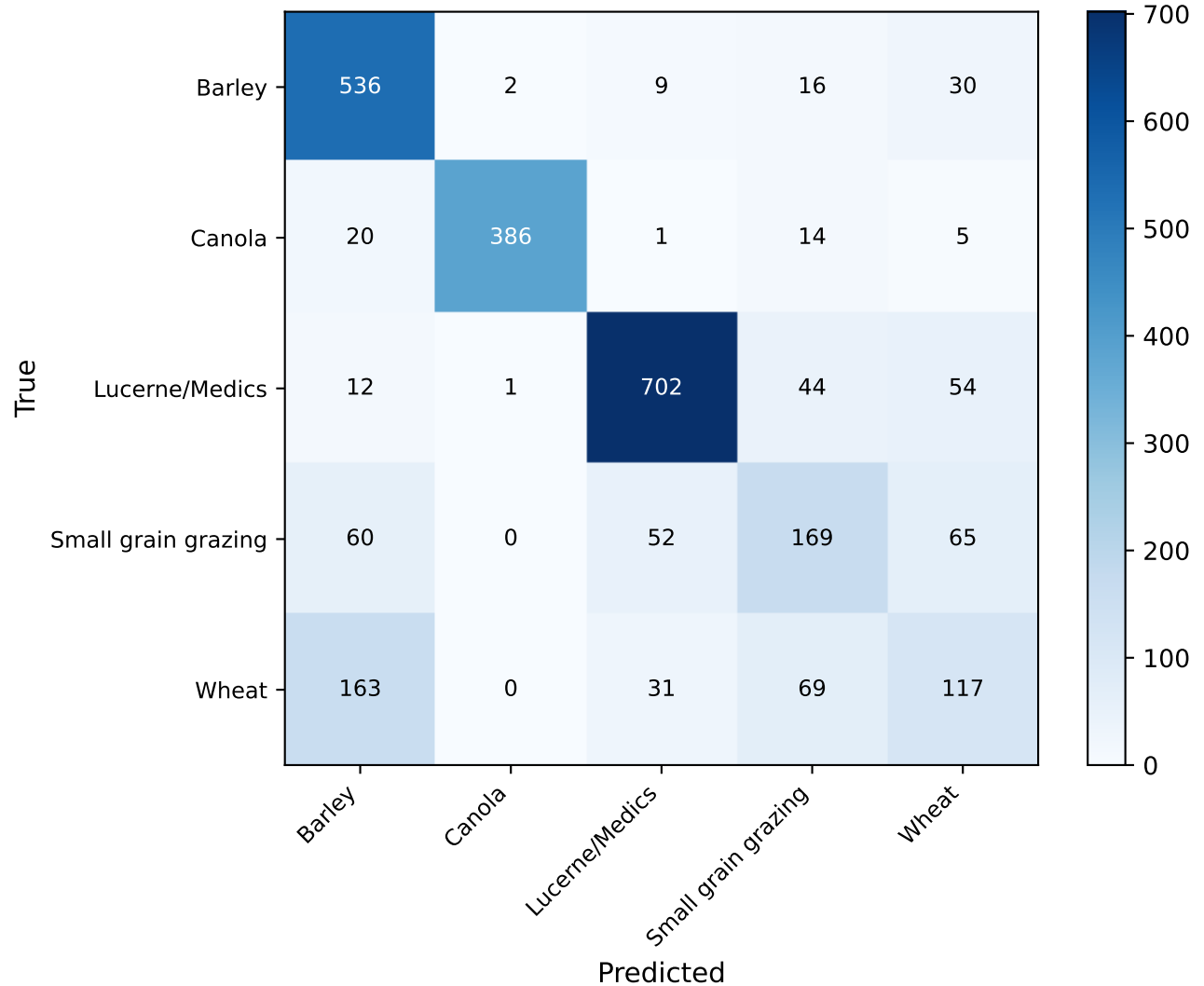
### Hyperparameters:

target\_size: [128, 128]  
batch\_size: 8  
epochs: 20  
optimizer: Adam(lr=1e-4)  
loss: sparse\_categorical\_crossentropy  
conv3d\_filters: [32, 64, 128]  
bands: ['SA\_B11', 'SA\_B12', 'SA\_B2', 'SA\_B6', 'SA\_EVI', 'SA\_hue']  
time\_steps: 10

Per-Class Metrics

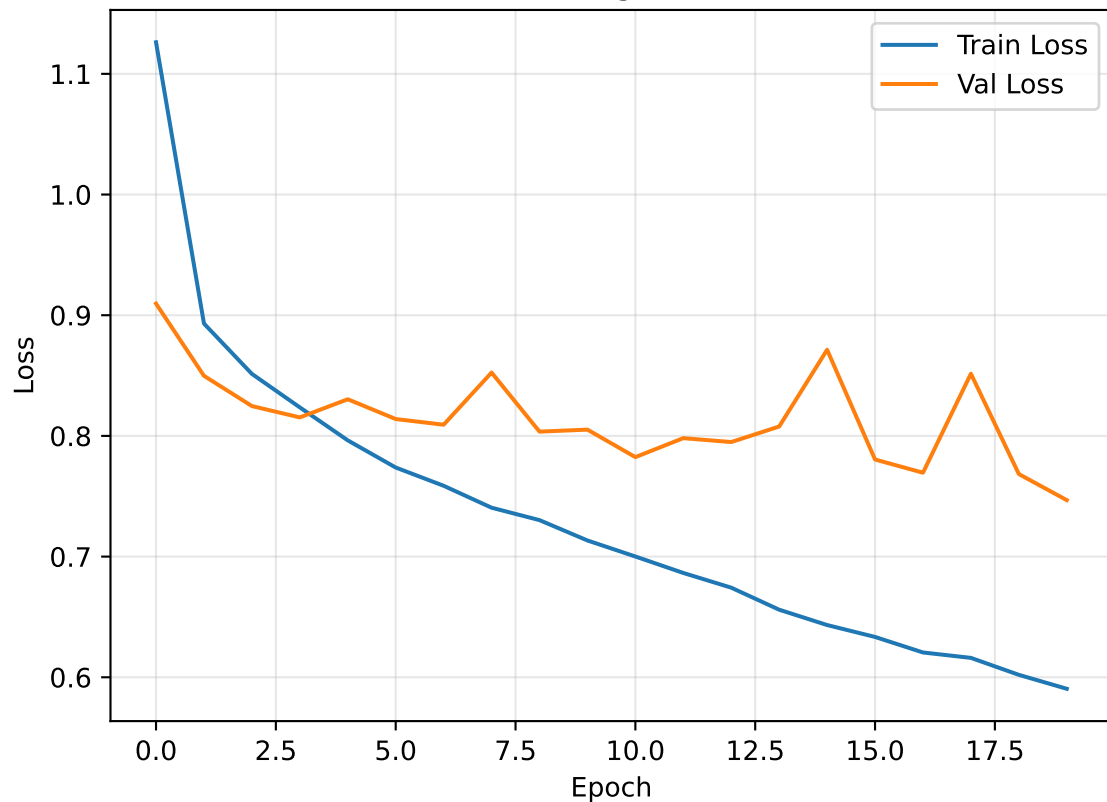
Class	Precision	Recall	F1-Score	Support
Barley	0.678	0.904	0.775	593
Canola	0.992	0.906	0.947	426
Lucerne/Medics	0.883	0.863	0.873	813
Small grain grazing	0.542	0.488	0.514	346
Wheat	0.432	0.308	0.359	380

# Confusion Matrix



# Training Curves

## Training Loss



## Training Accuracy

