```
"C:\Program Files\Python313\python.exe" "C:\Users\WORK STATION\OneDrive\Desktop\Projects\Micro Credential Course\Hybrid-Vision-Transfer-Classifier\codes\BaseModel(CNN+MobileV2).py"
2026-02-13 11:12:18.626513: I tensorflow/core/util/port.cc:153] oneDNN custom operations are on. You may see slightly different numerical results due to floating-point round-off errors from different computation orders. To turn them off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.
2026-02-13 11:12:24.208543: I tensorflow/core/util/port.cc:153] oneDNN custom operations are on. You may see slightly different numerical results due to floating-point round-off errors from different computation orders. To turn them off, set the environment variable `TF_ENABLE_ONEDNN_OPTS=0`.
2026-02-13 11:13:25.526012: I tensorflow/core/platform/cpu_feature_guard.cc:210] This TensorFlow binary is optimized to use available CPU instructions in performance-critical operations.
To enable the following instructions: SSE3 SSE4.1 SSE4.2 AVX AVX2 AVX512F AVX512_VNNI FMA, in other operations, rebuild TensorFlow with the appropriate compiler flags.
Epoch 1/10
100/100 ━━━━━━━━━━━━━━━━━━━━ 101s 826ms/step - accuracy: 0.8266 - loss: 0.5913
Epoch 2/10
100/100 ━━━━━━━━━━━━━━━━━━━━ 108s 1s/step - accuracy: 0.9756 - loss: 0.1365
Epoch 3/10
100/100 ━━━━━━━━━━━━━━━━━━━━ 100s 996ms/step - accuracy: 0.9872 - loss: 0.0803
Epoch 4/10
100/100 ━━━━━━━━━━━━━━━━━━━━ 94s 934ms/step - accuracy: 0.9937 - loss: 0.0551
Epoch 5/10
100/100 ━━━━━━━━━━━━━━━━━━━━ 132s 834ms/step - accuracy: 0.9975 - loss: 0.0408
Epoch 6/10
100/100 ━━━━━━━━━━━━━━━━━━━━ 83s 834ms/step - accuracy: 0.9984 - loss: 0.0316
Epoch 7/10
100/100 ━━━━━━━━━━━━━━━━━━━━ 79s 794ms/step - accuracy: 0.9987 - loss: 0.0253
Epoch 8/10
100/100 ━━━━━━━━━━━━━━━━━━━━ 81s 805ms/step - accuracy: 0.9991 - loss: 0.0208
Epoch 9/10
100/100 ━━━━━━━━━━━━━━━━━━━━ 79s 794ms/step - accuracy: 0.9991 - loss: 0.0174
Epoch 10/10
100/100 ━━━━━━━━━━━━━━━━━━━━ 79s 793ms/step - accuracy: 0.9994 - loss: 0.0147
25/25 ━━━━━━━━━━━━━━━━━━━━ 22s 786ms/step

--- PARENT BASIS METRICS ---
Accuracy: 99.12%
MCC:      0.9900
MSE:      0.0023
MAE:      0.0079

Classification Report (includes F1-Score):
                   precision    recall  f1-score   support

     Anthracnose       0.99      1.00      1.00       100
Bacterial Canker       1.00      0.99      0.99       100
  Cutting Weevil       1.00      1.00      1.00       100
        Die Back       1.00      1.00      1.00       100
       Gall Midge       0.98      0.99      0.99       100
          Healthy       1.00      0.97      0.98       100
  Powdery Mildew       0.98      1.00      0.99       100
     Sooty Mould       0.98      0.98      0.98       100

        accuracy                           0.99       800
       macro avg       0.99      0.99      0.99       800
    weighted avg       0.99      0.99      0.99       800

WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is considered legacy. We recommend using instead the native Keras format, e.g. `model.save('my_model.keras')` or `keras.saving.save_model(model, 'my_model.keras')`.

Process finished with exit code 0

```