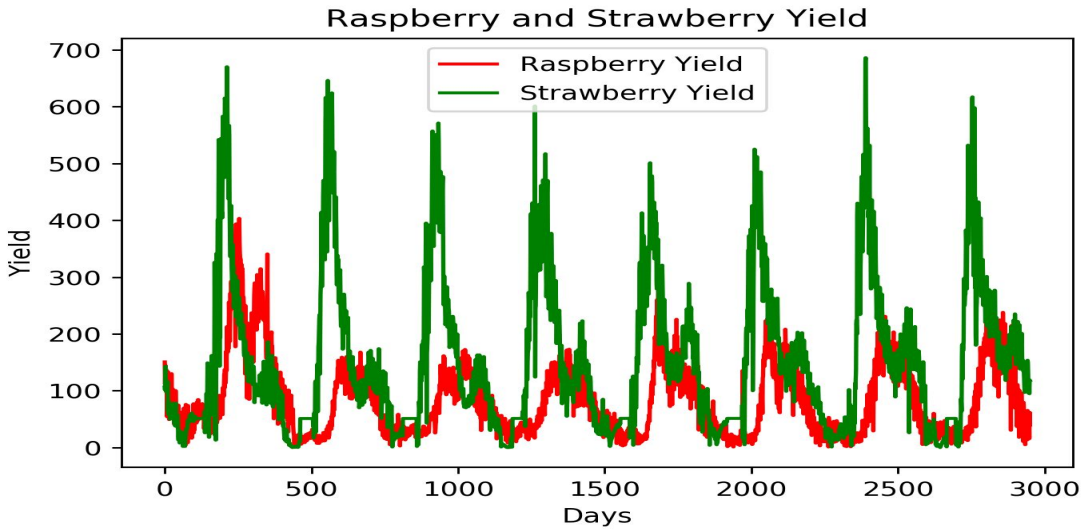
Results for Transfer Learning

Strawberry and Raspberry Yield:

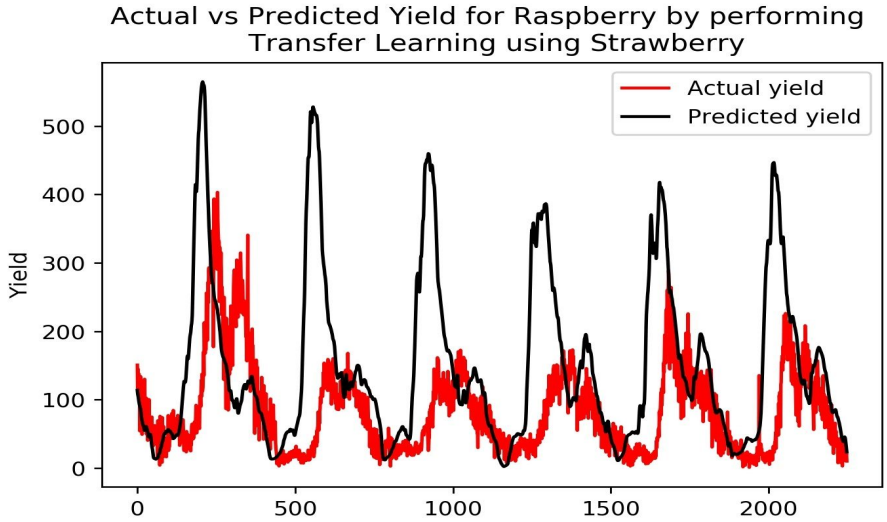


Inference from above graph:

- The strawberry yields are much more than raspberry yield.
- They follow almost similar seasonality.
- We have eight peaks for both strawberry and raspberry yields in a period of eight years.

Performing Transfer Learning on Raspberry using the weights trained on Strawberry data:

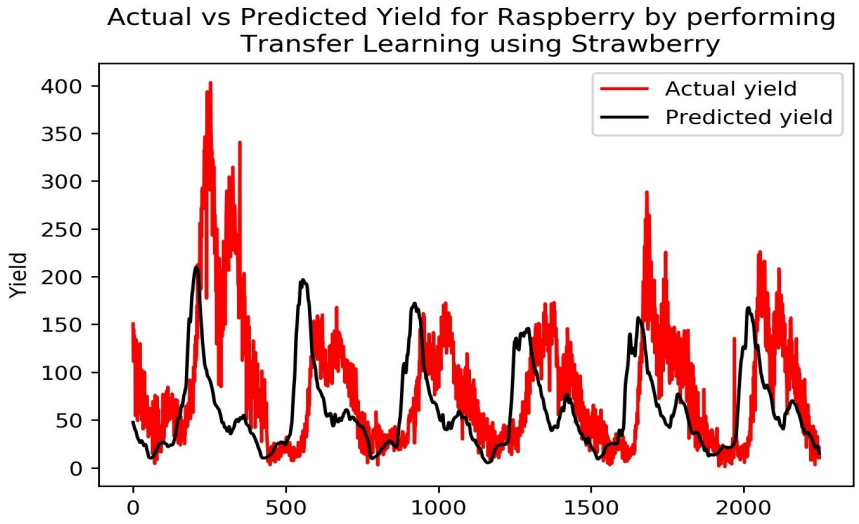
1. **Without Freezing Layers:**



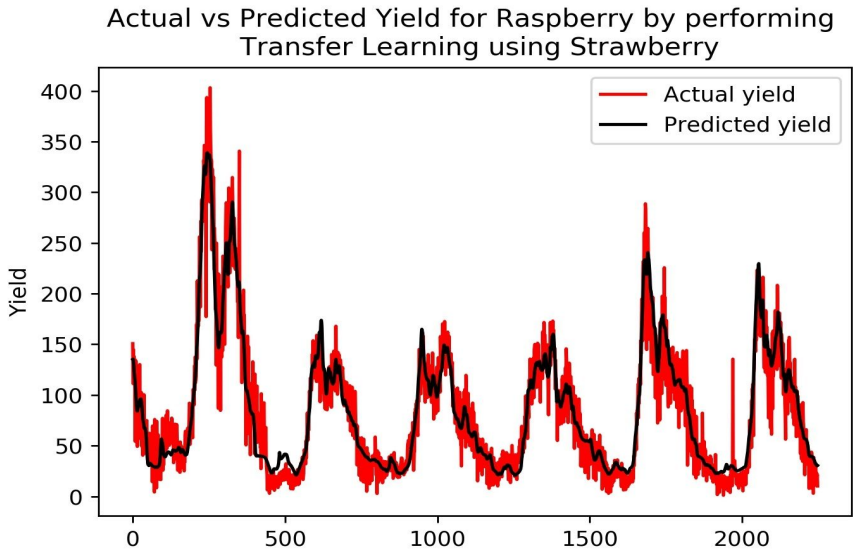
Inference:

- Since, the weights are trained using the strawberry yield and strawberry yield is much more than the raspberry yield thus, the model predicts the raspberry yield value much greater than the actual raspberry yield value
- Although, the transfer learning follows the seasonality in the TS but cannot predict the peaks(range) of yield

2. **<u>On Freezing Base Model:</u>**



3. **<u>On Fine tuning the model:</u>**

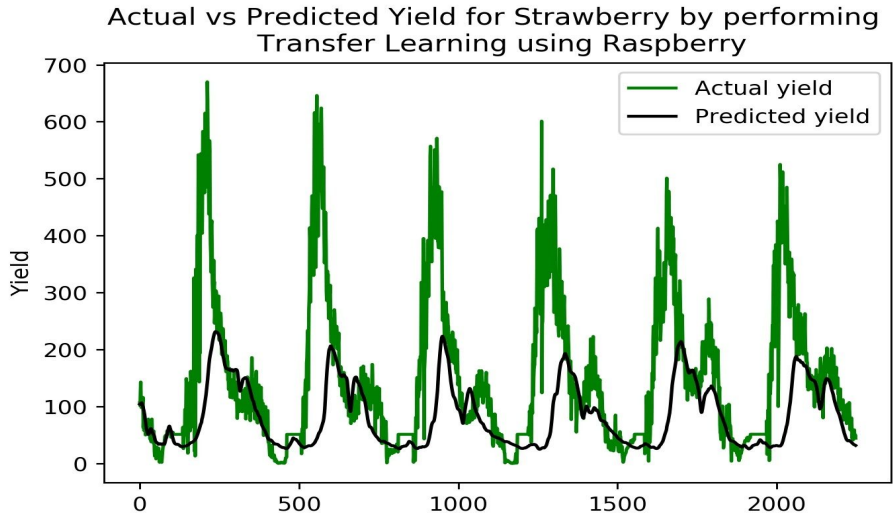


Results for weights trained on Strawberry data and learning transferred on raspberry data

Metric	Learning On Raspberry data	TL on Raspberry without freezing	TL on Raspberry with freezing	TL on Raspberry with Fine tuning
MAE	**19.44**	**97.96**	**50.3**	**28.4**
RMSE	**28.34**	**152.37**	**64.8**	**41.84**
AGM	**4.762**	**720.5**	**60.05**	**15.24**

Performing Transfer Learning on Strawberry using the weights trained on Raspberry data:

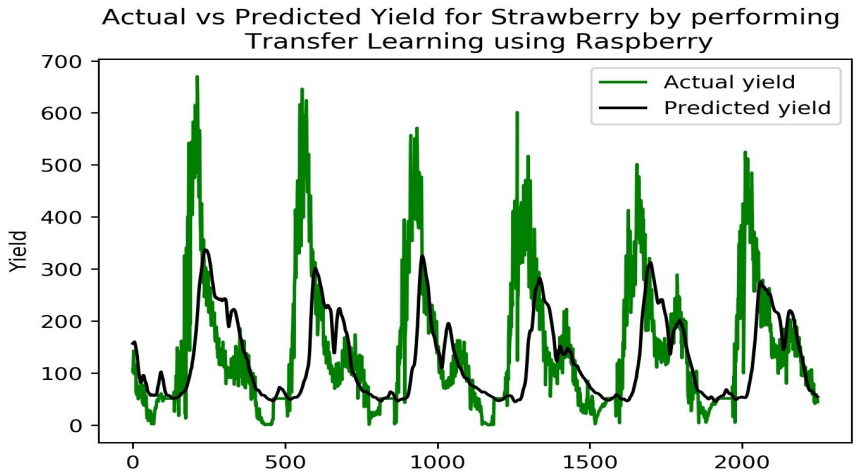
1. **Without Freezing Layers:**



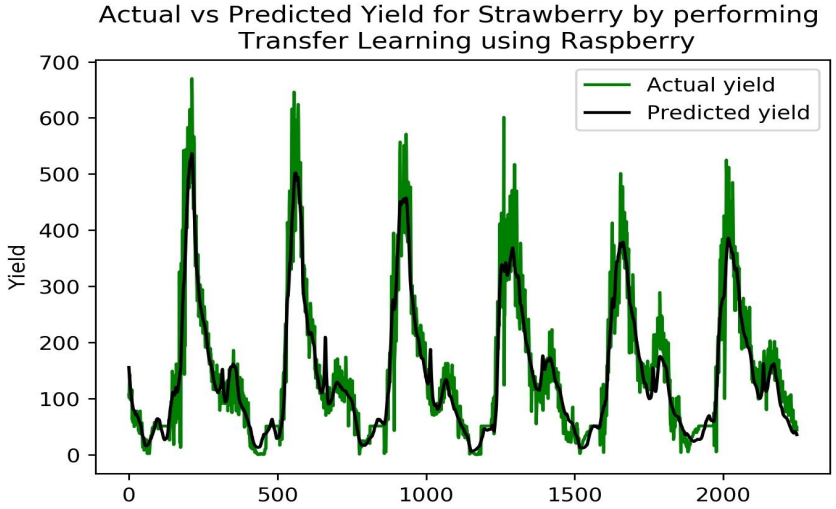
Inference:

- Since, the weights are trained using the raspberry yield and raspberry yield is lesser than the strawberry yield thus, the model predicts the strawberry yield value lesser than the actual strawberry yield value.
- Although, the transfer learning follows the seasonality in the TS but cannot predict the peaks(range) of yield

2. **On Freezing Base Model:**



3. **<u>On Fine tuning the model:</u>**



Results for weights trained on Raspberry data and learning transferred on strawberry data

Metric	**Learning on Strawberry data**	**TL on Strawberry**	**TL on Strawberry with Freezing**	**TL on Strawberry with FT**
MAE	**39.84**	**99.91**	**92.62**	**47.363**
RMSE	**59.16**	**168.49**	**153.0**	**68.22**
AGM	**7.60**	**167.29**	**126.24**	**11.81**