

# Whole bunch fermentation of Shiraz and Pinot Noir: influence on 'green' characters and astringency



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## Background

Shiraz and Pinot Noir berries do not contain methoxypyrazine (IBMP, 'capsicum' flavour). Recent studies have shown that the stems/stalks of Shiraz grapes can have detectable levels of IBMP.

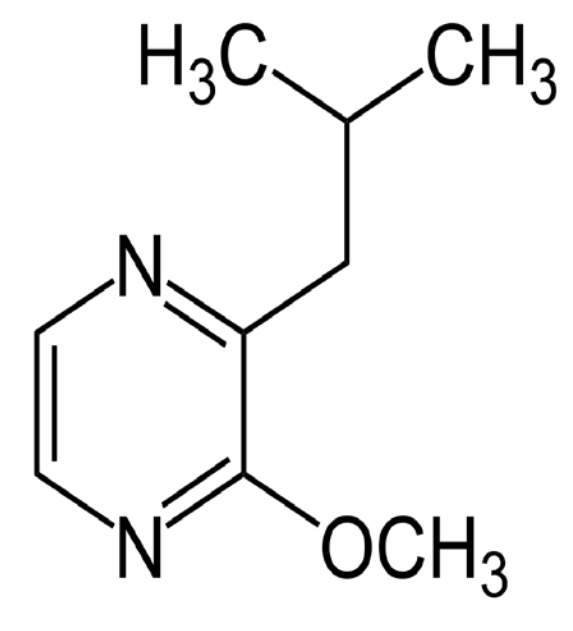
- Can whole bunch (WB) fermentation give elevated IBMP/'green' characters to Shiraz and Pinot Noir wines?
- What about tannin and other sensory effects?

## Experimental

- Shiraz and Pinot Noir, Adelaide Hills 2018
- 50 kg ferments in triplicate
- Hand-picked fruit

0% whole bunches – all crushed, destemmed  
 25% WB } Crushed,  
 50% WB } destemmed  
 75% WB } mixture on top  
 100% whole bunches

- Sensory and chemical analysis of wines



3-isobutyl-2-methoxypyrazine (IBMP)

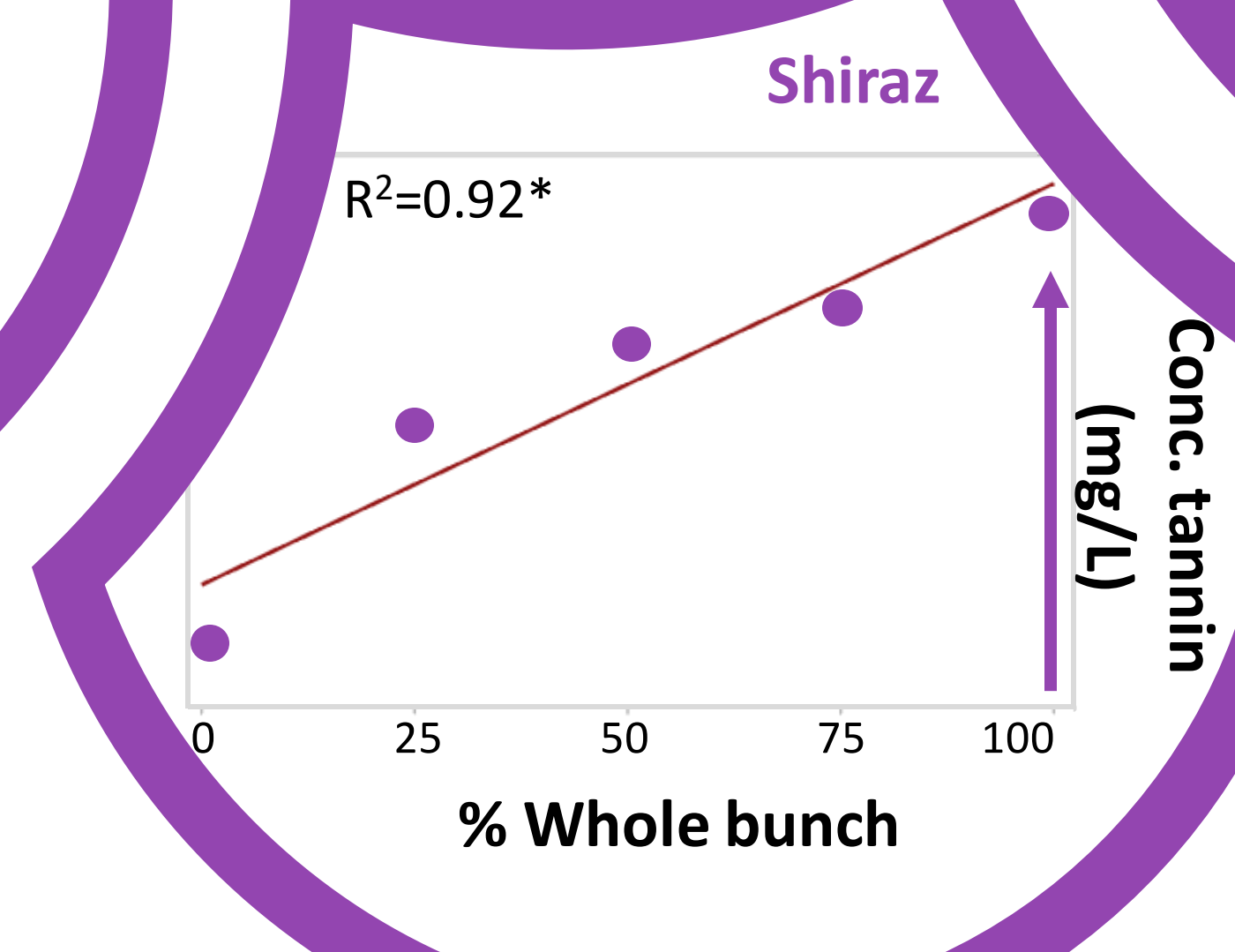
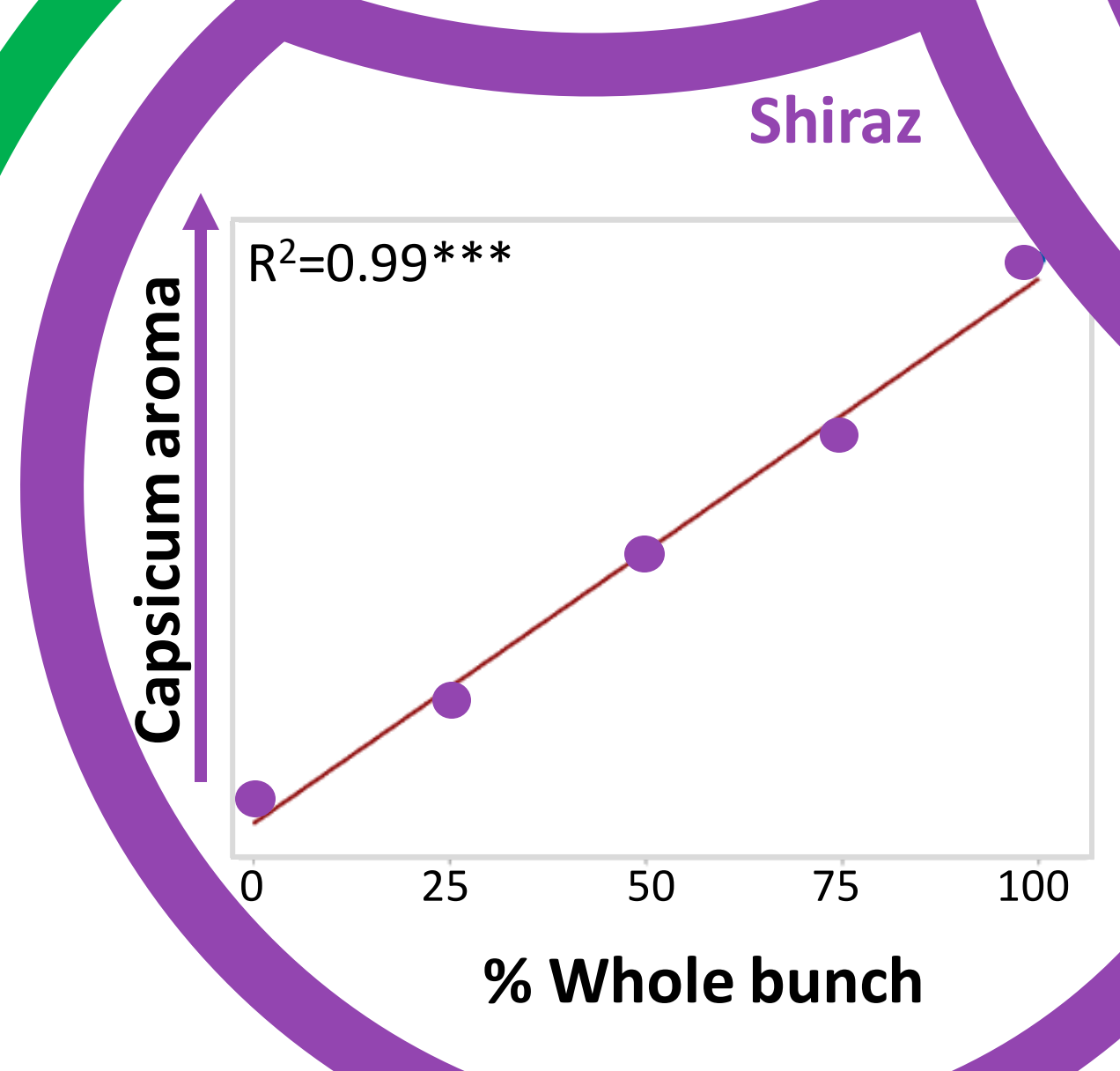
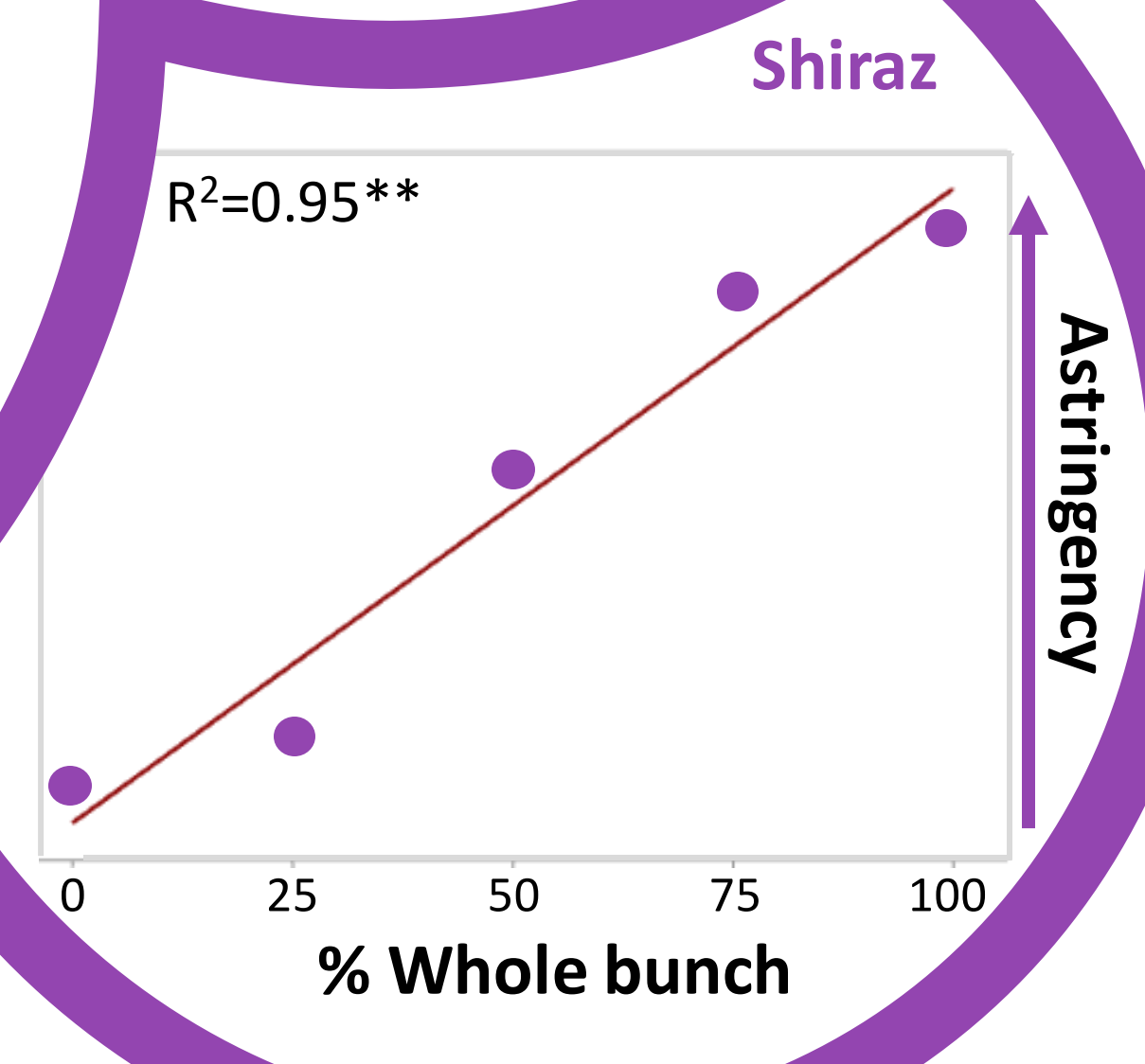
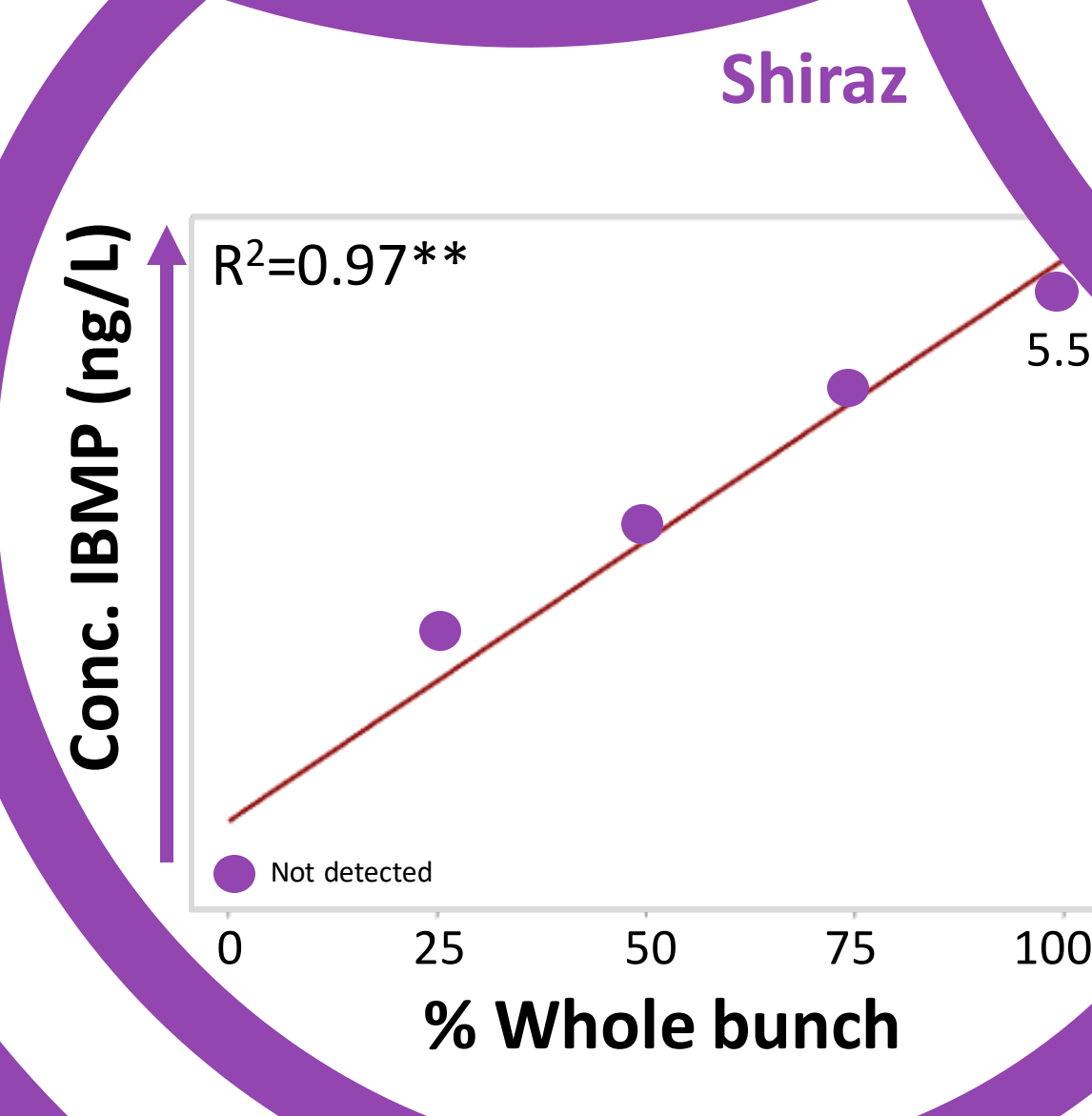
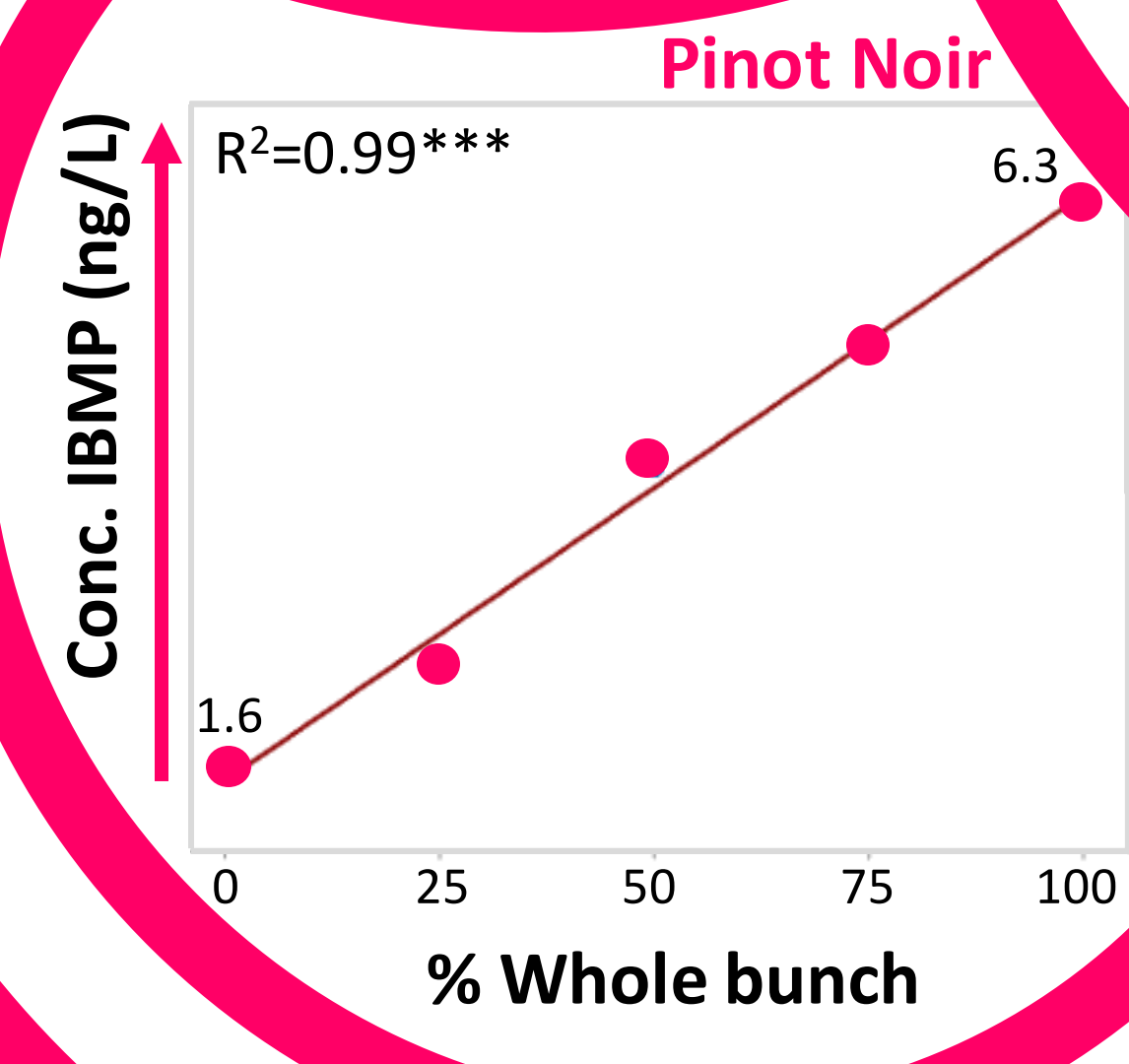
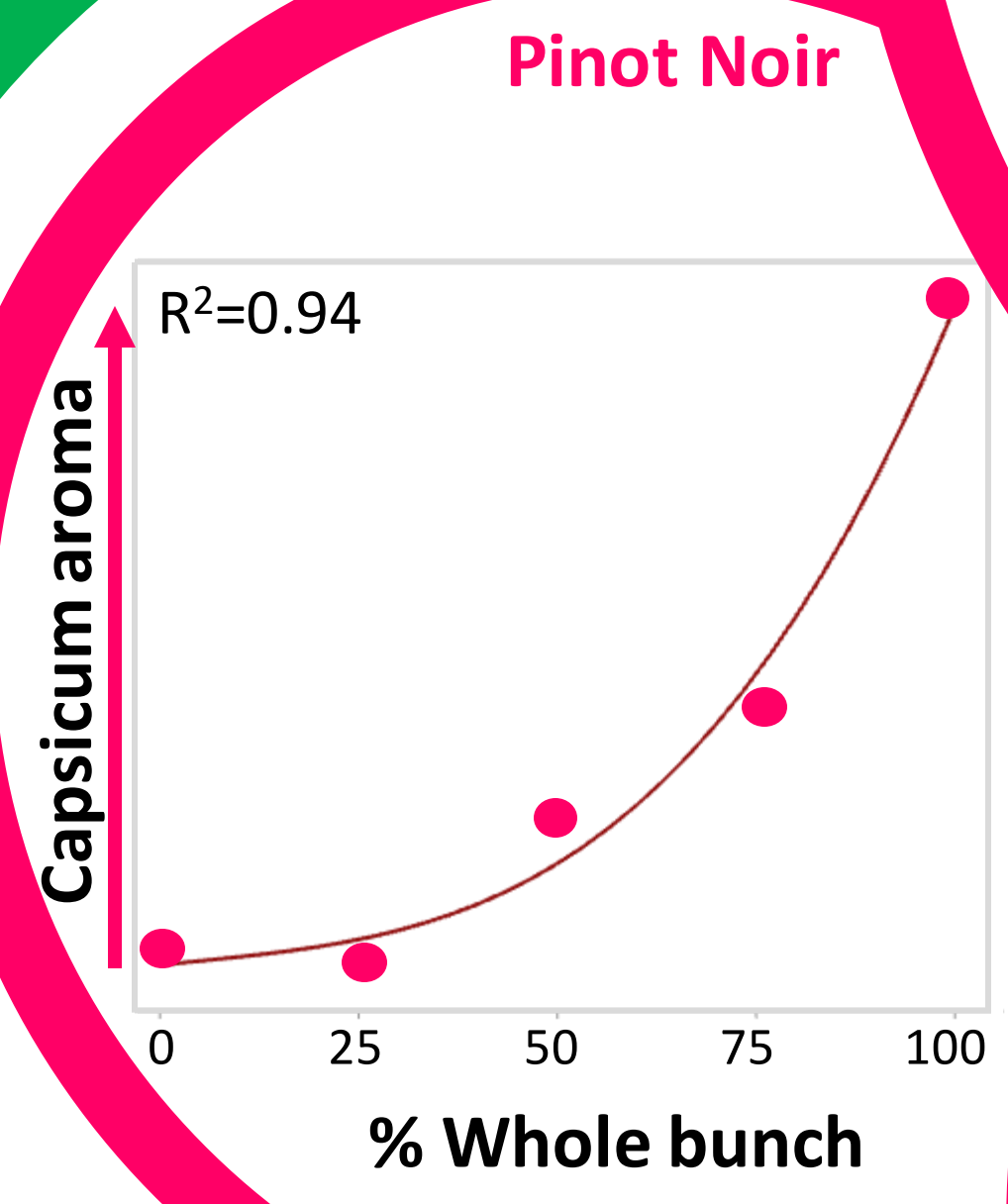


## Results

For Shiraz and Pinot Noir colour intensity increased with % WB. Pinot Noir was also less brown.

For both varieties, concentration of IBMP and 'capsicum' aroma were highly correlated with % WB in the ferment.

For Shiraz, the concentration of tannin and the perception of astringency were increased with WB inclusion



## Conclusion

- Winemakers need to consider the trade-off between production of 'green' characters vs enhancement of wine colour and increased tannin when adding whole bunches to their ferments.

## Outcome

Whole bunch fermentation can result in methoxypyrazine-influenced wines.

