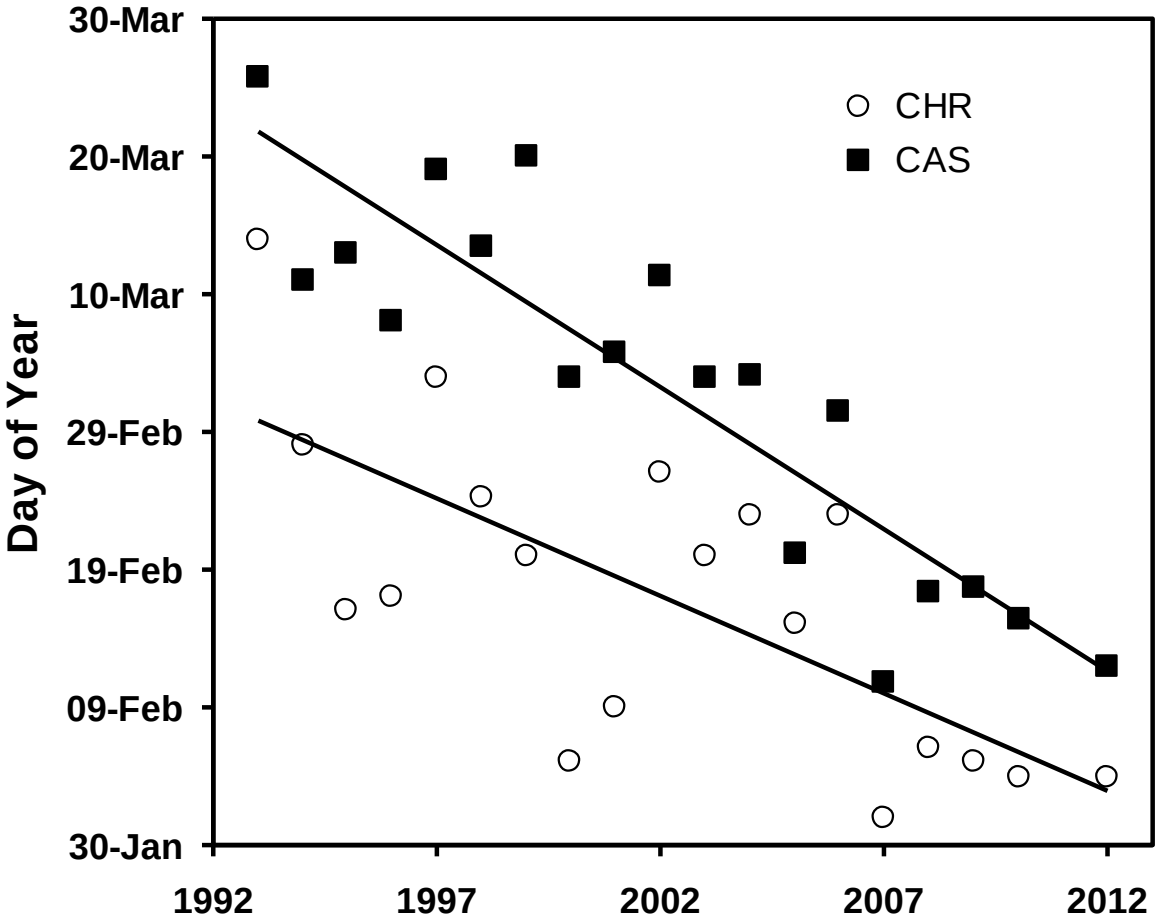
Delayed Pruning of Grapevines

Paul Petrie & Sam Brookes, TWE

Victor Sadras & Martin Moran, SARDI

TREASURY WINE ESTATES

Vintage becoming earlier



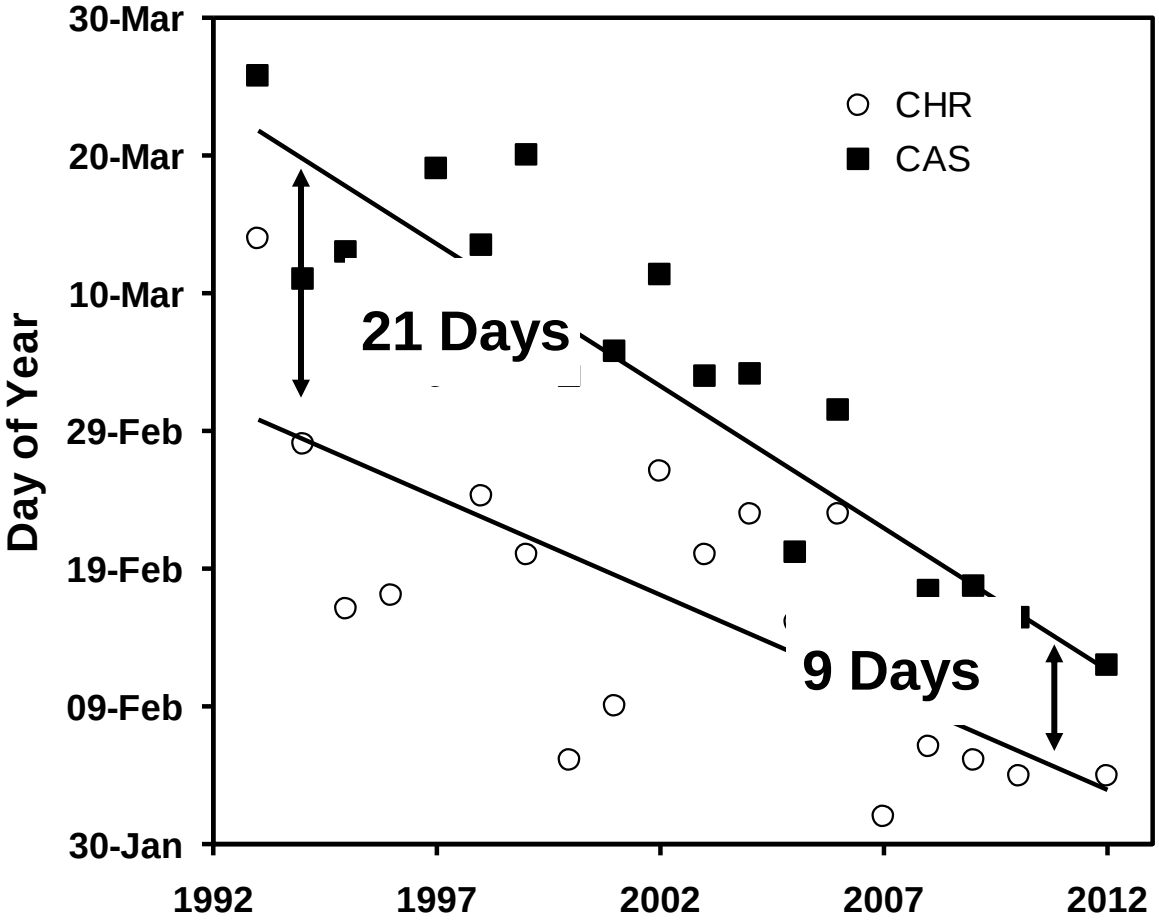
McLaren Vale Cabernet Sauvignon

2.1 Days per year

McLaren Vale Chardonnay

1.4 Days per year

Vintage becoming more compressed



McLaren Vale Cabernet Sauvignon

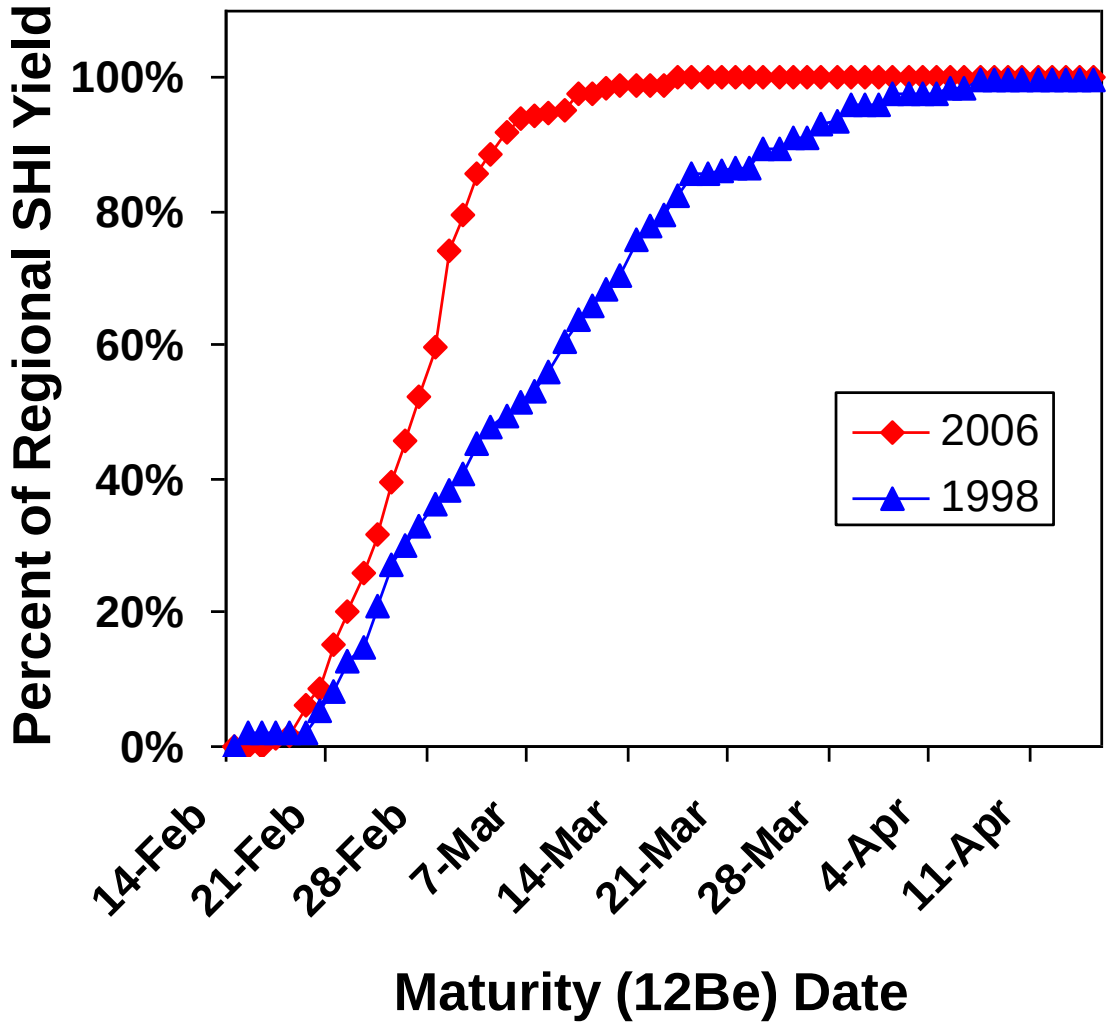
2.1 Days per year

McLaren Vale Chardonnay

1.4 Days per year

Peak Demands on Harvesting and Crushing Facilities are Increasing

Vintage becoming more compressed



Barossa Shiraz

2006 vs 1998

Day which blocks reached 12Be

Percent regional yield

By delaying maturity can we delay harvest?

Delay maturity into a cooler part of the season

- Better quality?

Improved harvest logistics

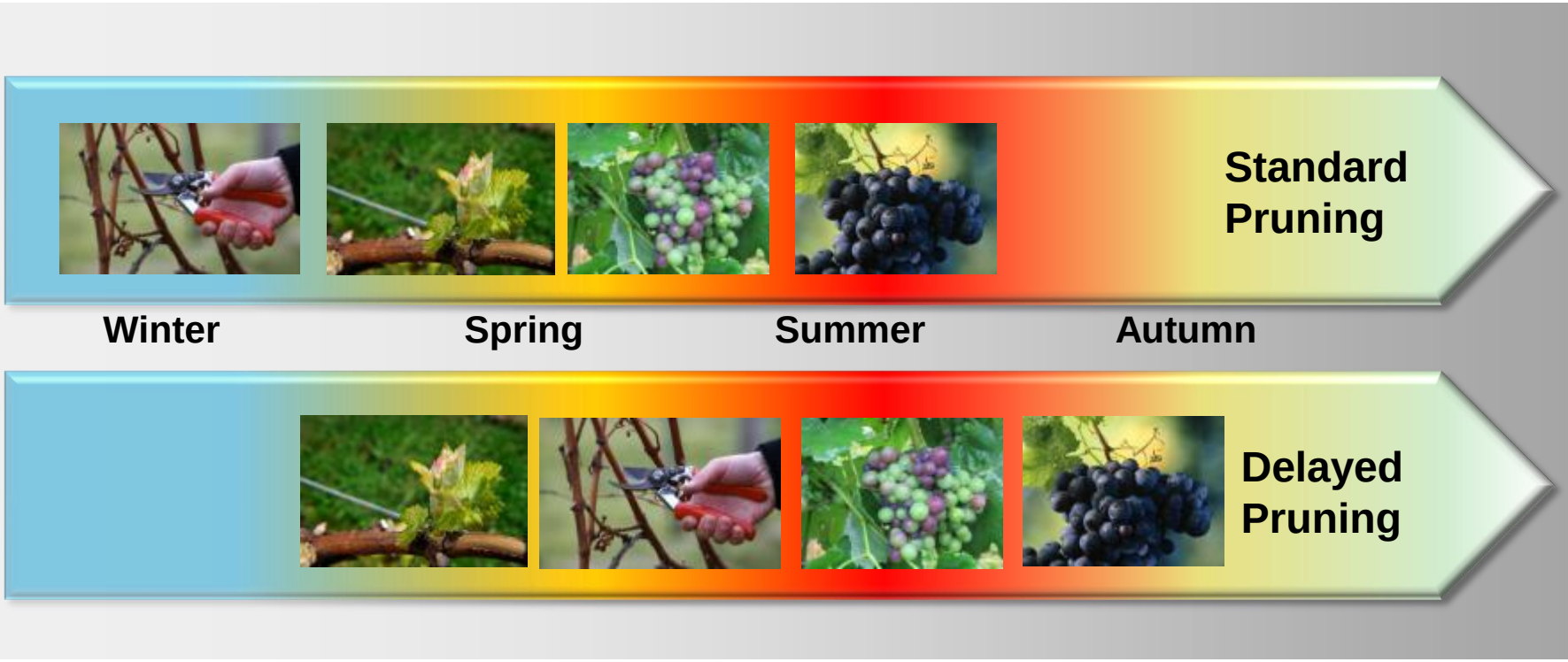
- Harvest at optimal time
- Better use of facilities

Reduced risk

- Extreme events i.e. heat wave

Adaptation strategies in the vineyard

Year 1 delayed pruning trial



Can we use delayed pruning in order to delay harvest and move ripening into a cooler part of the season?

By delaying maturity can we delay harvest?

Five Pruning Dates

26 May (early normal)

4 August (late normal)

5 September (bud burst)

22 September

18 October

No pre-pruning

Unpruned 22 September (Shiraz)

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By delaying maturity can we delay harvest?

Five Pruning Dates

26 May (early normal)

4 August (late normal)

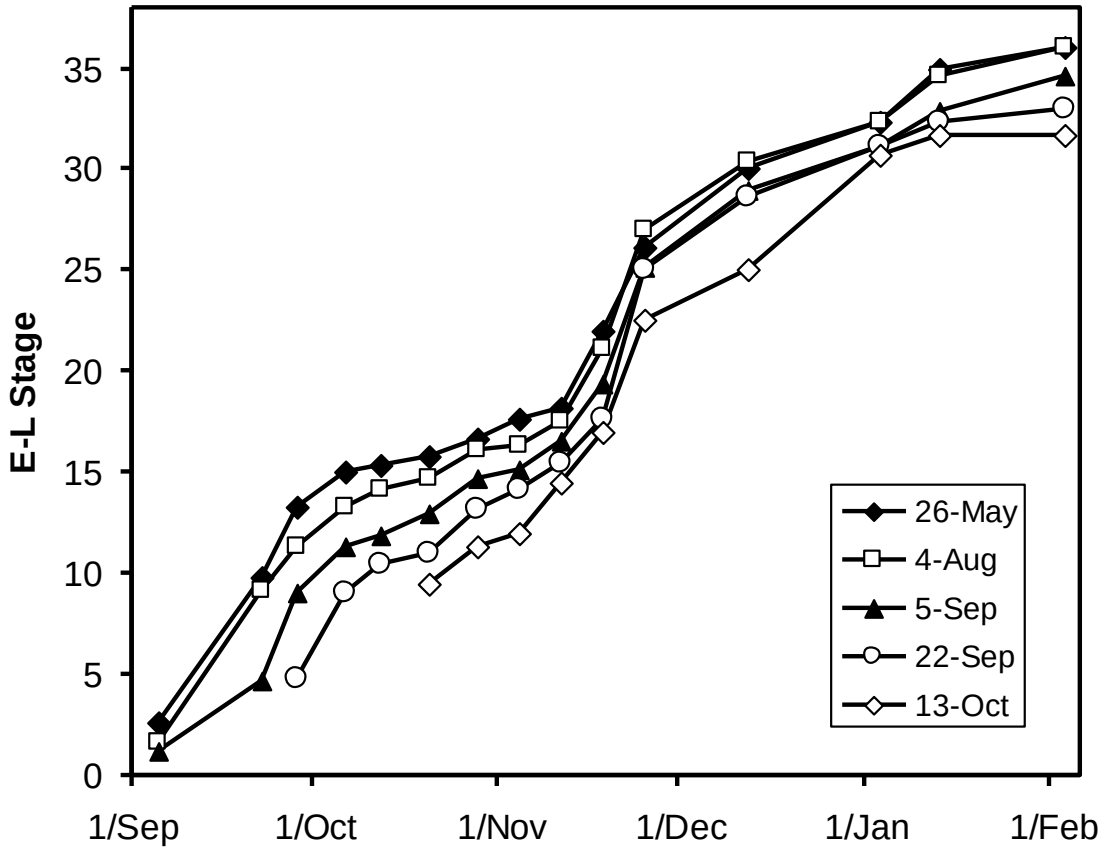
5 September (bud burst)

22 September

18 October

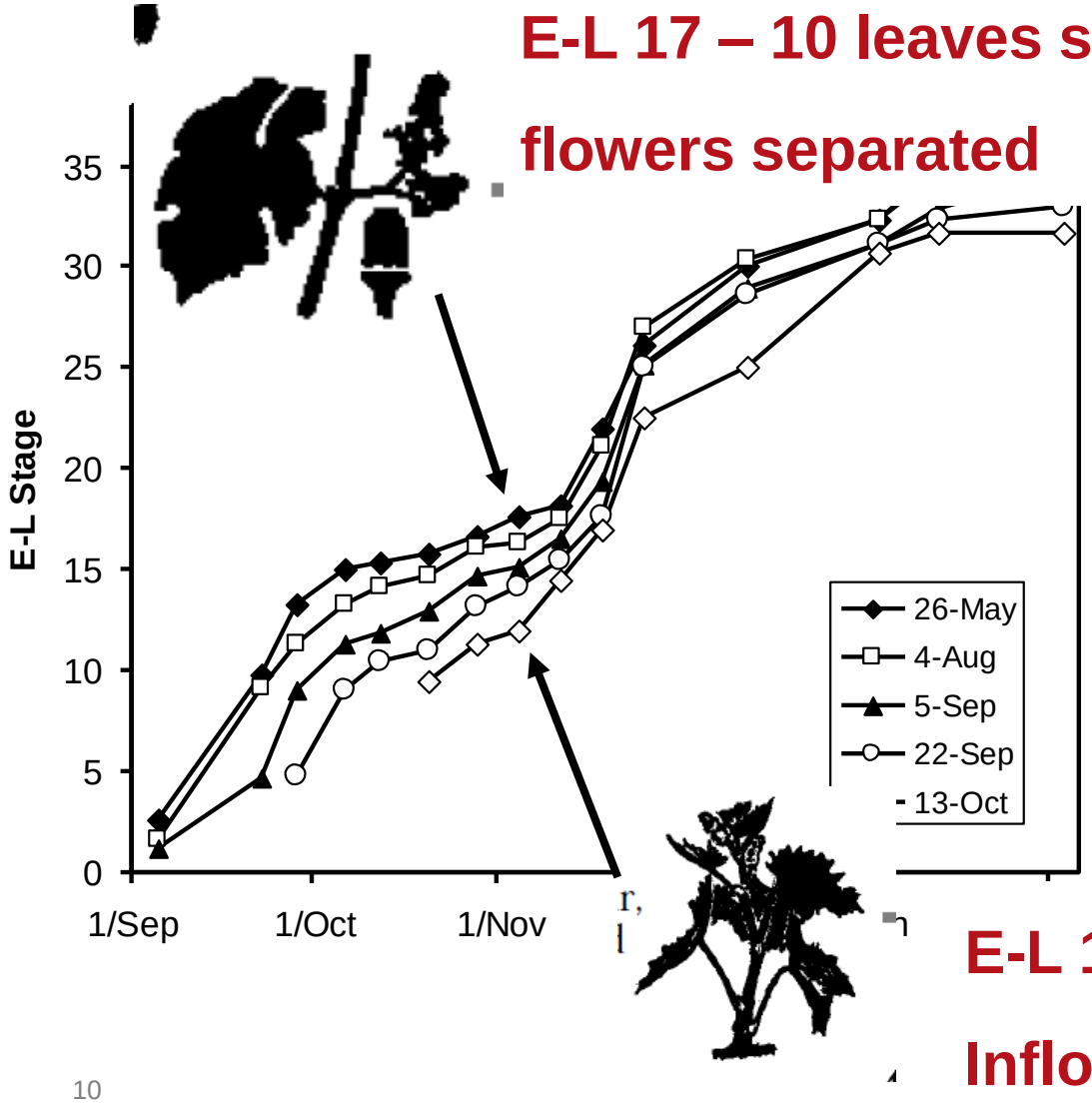
Pruned 26 May and 22 September (Shiraz)

Tracked Phenology during the growing season



Larger differences earlier in the season

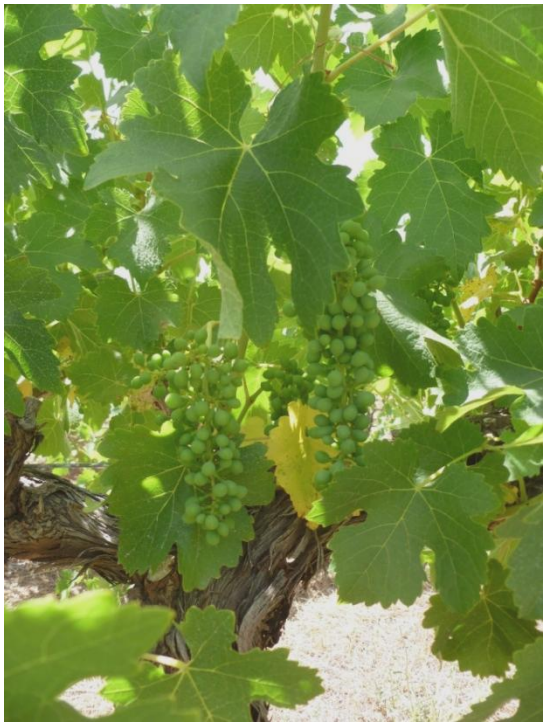
Tracked Phenology during the growing season



Tracking fruit colour at veraison (11 January)

Pruned 26 May

Pruned 22 Sept



Pruned 13 Oct

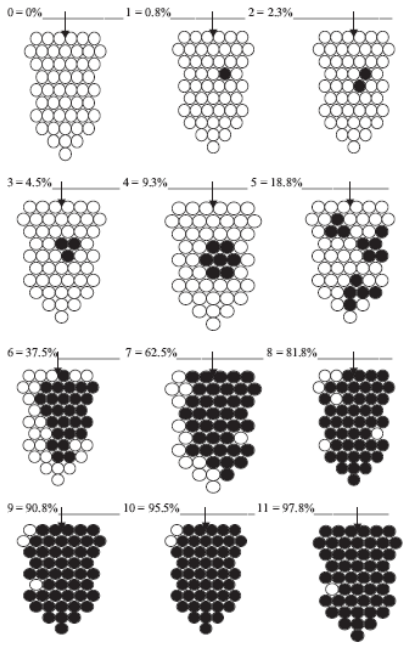
Adaptation strategies in the vineyard

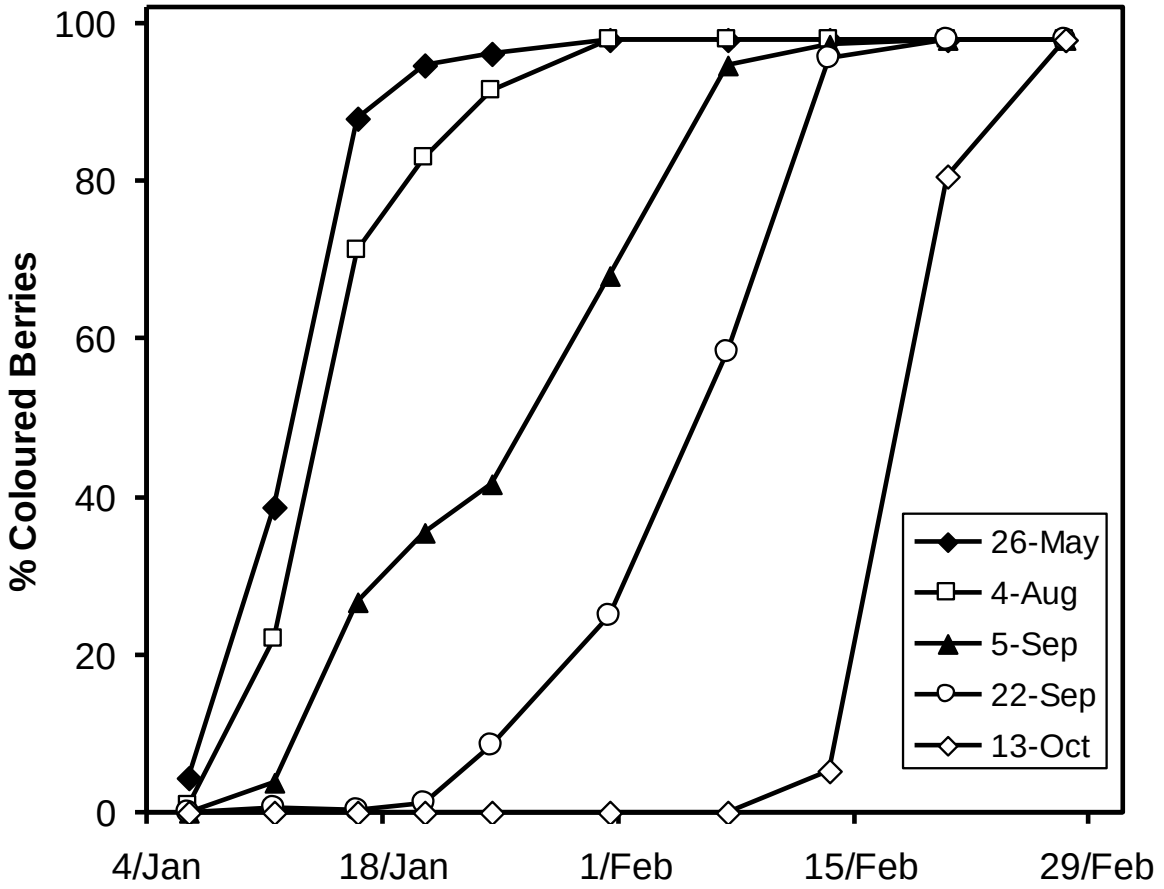
Year 1 delayed pruning trial

Tracking fruit colour at veraison

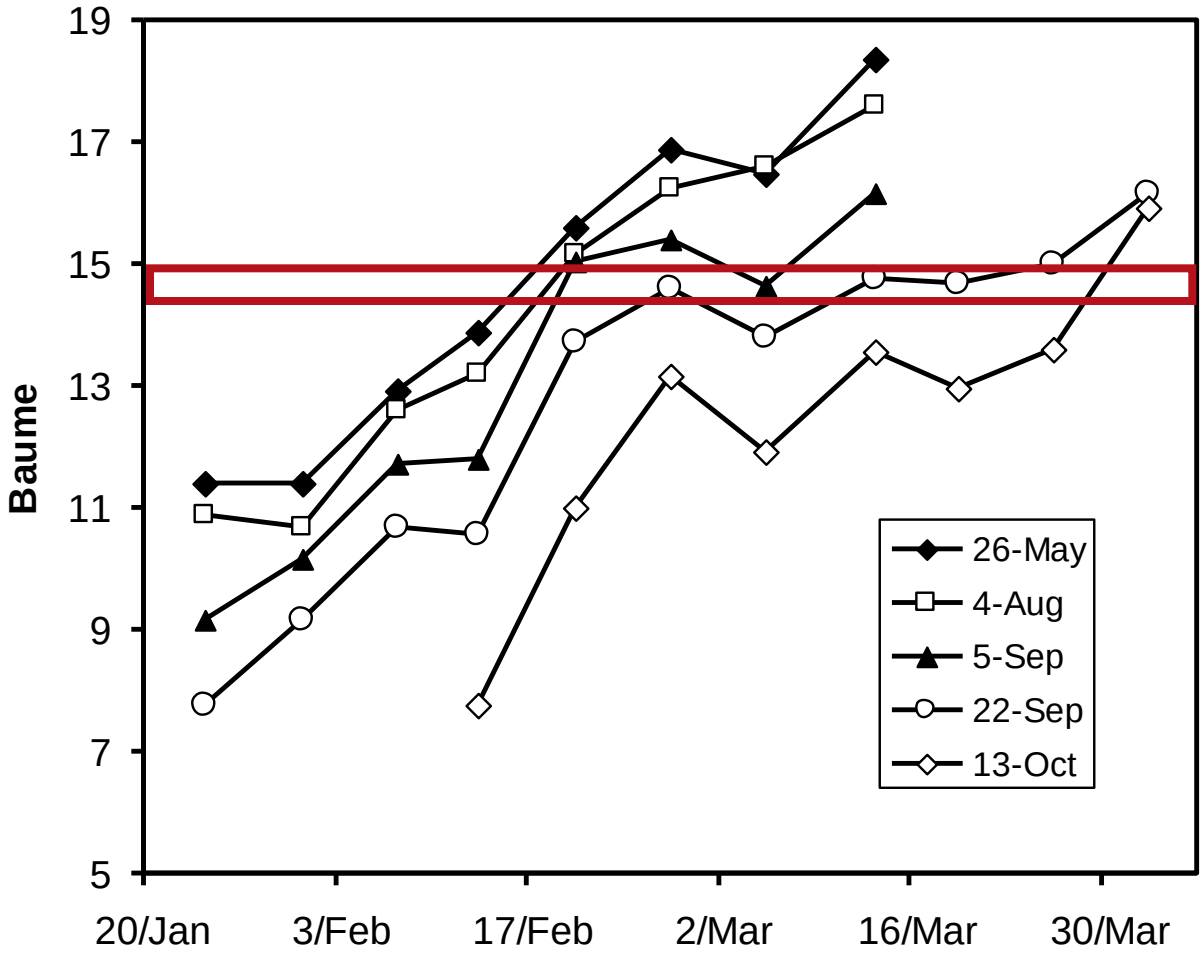
Visual scoring

Large spread between later pruning times.





Tracking Maturity



Large spread between later pruning times

Earlier pruning times now closer

Fruit harvested about 14.5 Be for winemaking

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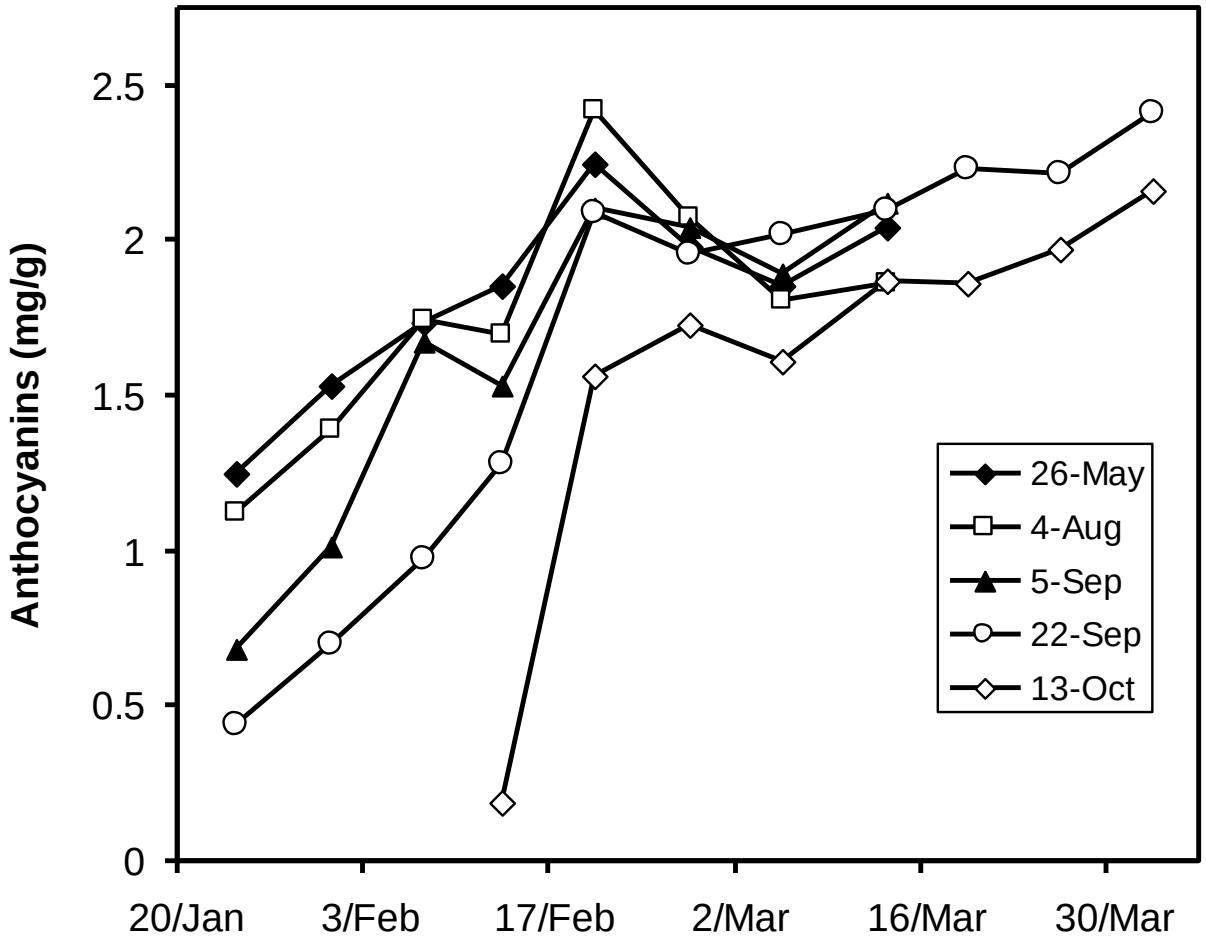
Anthocyanins



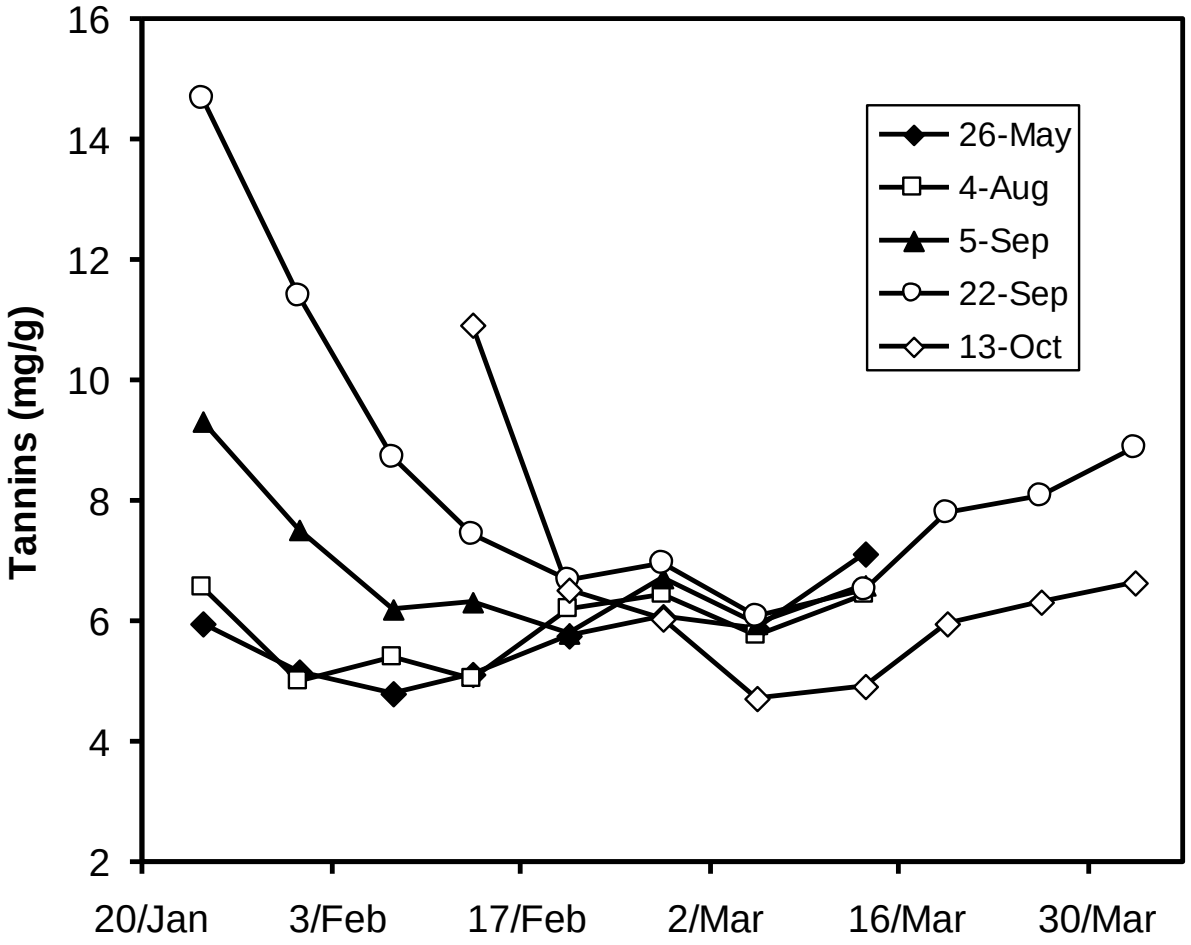
Later pruning dates catch up

13 October is delayed

As per Iland

Wine quality?

Tannins



Mouth feel of wine

Harvest decisions

Later pruning dates catch up

22 Sept & 13 Oct shifted later

Wine quality ?

Yield components

Pruning Date	Harvest Date	Yield (kg/vine)	Bunch No	Bunch Wt (g)	Berry Wt (mg)	Pruning Wt (g)
26 May	20 Feb	3.9	64.5	51.7	1.1	1137
4 Aug	20 Feb	3.6	67.6	58.0	1.1	1161
5 Sept	28 Feb	2.6	57.3	43.8	1.0	1118
22 Sept	5 March	3.1	78.6	44.1	0.9	887
13 Oct	4 April	1.4	47.3	27.7	0.9	453

Thinned vines yielded approximately 3kg

Delaying Maturity 2012-13

Commercial Scale Trials

Shiraz in the Barossa

3 by 10t parcels

Cabernet Sauvignon

in Wrattonbully

3 by 20t parcels

Conclusions

Potentially counter some of the critical effects of climate change

Earlier maturity

Compressed vintage

Cost effective

Implement as part of an overall strategy

Not necessarily in the same block every season

Co-authors

Samuel J. Brook – Technical Officer, TWE

Martin A. Moran – Research Officer, SARDI

Victor O. Sadras – Research Scientist, SARDI

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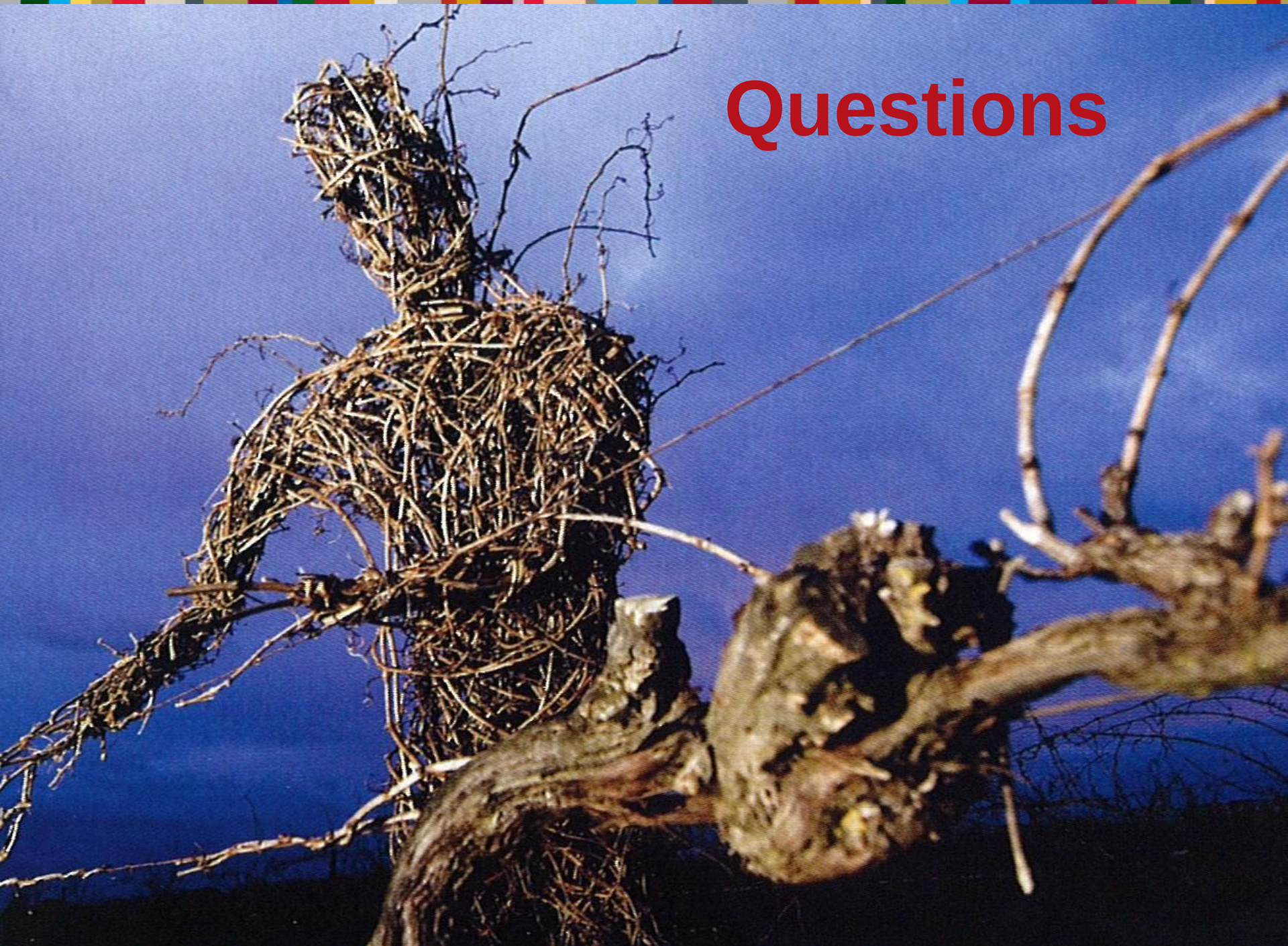
Questions