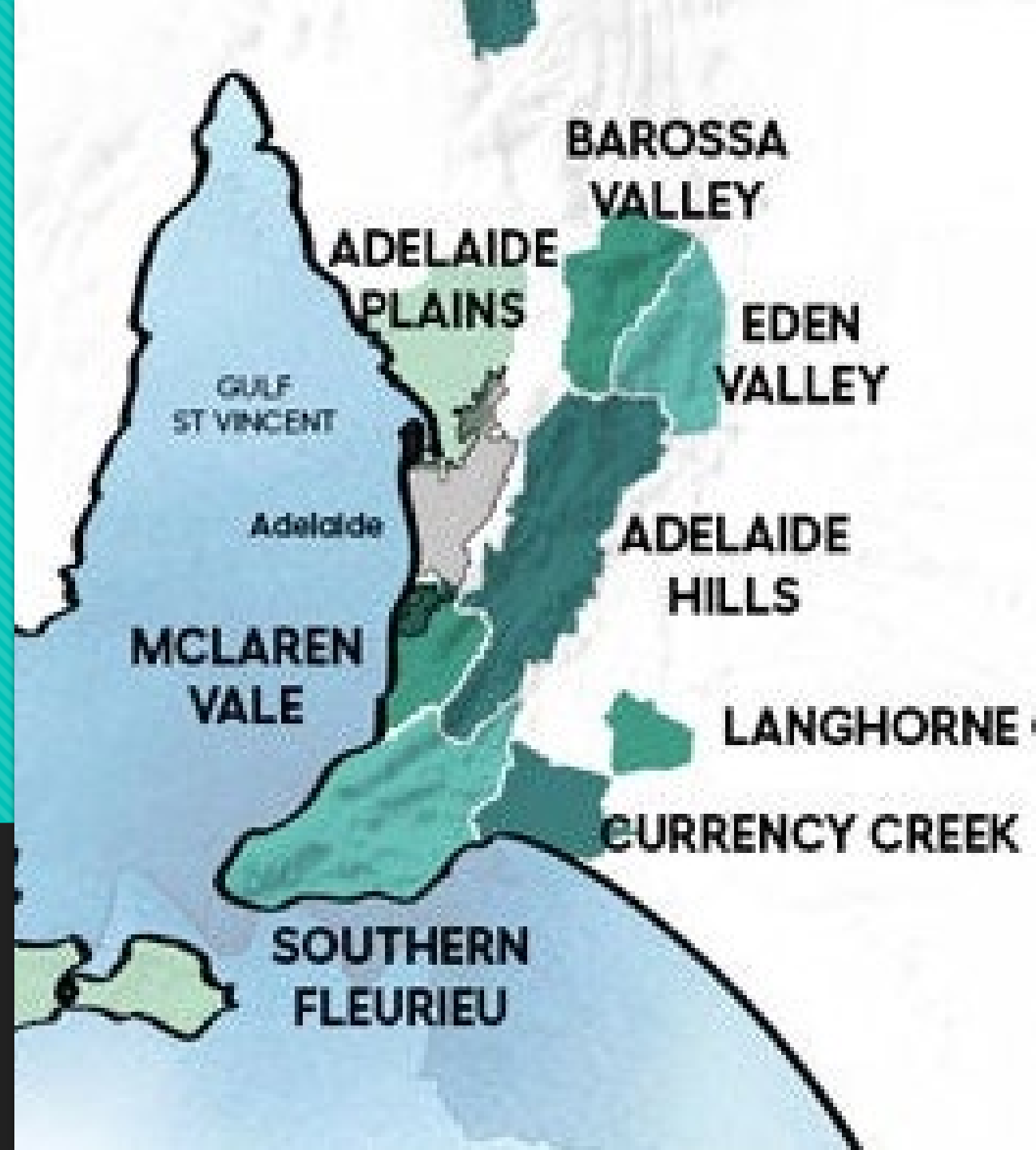


# Great Wine Capitals

## Adelaide, South Australia

### Soil and Water

# South Australia Wine regions



# Aim

- Vineyard Water
- Soil Management

# Case Studies

- Molly Dooker      McLaren Vale
- Shaw and Smith Adelaide Hills
- Penfolds              Barossa
- Hither & Yon      McLaren Vale



# Molly Dooker

# Mclaren Vale

- 50Ha + 50Ha of growers, Very conventionally grown
- Sandy hills
- Very little done under vine, No sweeping of prunings
- Several herbicides each year.
- Limits water usage early to control canopy growth
- Intensive water use late season to maintain yield

# Molly Dooker Water Usage

- Ground water, High salt content
- Adelaide recycled water, Expensive to purchase and high setup cost.
- Dam water is limited
- 1.0 -1.5 ML/ha



# Molly Dooker





# Shaw and Smith

# Adelaide Hills

- Organic
- 50+Ha over multiple sites
- High altitude 350m above sea level
- High rainfall comparable to Hawkes Bay
- Undervine mow, Multiclean (wiper), Blade and organic herbicide
- Good high quality ground water, dams replenished from rainfall.
- Algae in dams an issue. Looking at planted filtration areas

# Shaw and Smith





# Shaw and Smith Pictures



# Shaw and Smith Clones

- Pinot Noir
  - 114,115, 777, MV6
- Chardonnay
  - B76 (largest component), 95, 96, 110 (sparkling), 548,1066, Gingin
- Syrah
  - Best great Western(preferred), Sauvji???, 2626, 1654, 470 (preferred)

# Penfolds

# Barossa

- 2000+ Ha owned, 1000+ Ha as a grower base depending on season
- Has most of the best ground in the Barossa, looks for red sand with iron nodules



# Penfolds Over row Cover



# Penfolds Over row cover

- Aim: reduce impact of climate change
- 25% reduced water use
- Better canopy and leaf colour
- Maintained or higher fruit quality and yield
- Very quiet and no wind

# Penfolds water use

- Darling Murray river water (BIL). High cost and prone to environment changes
- Some ground water
- .5 – 1 ML/Ha
- 4-6T/ha

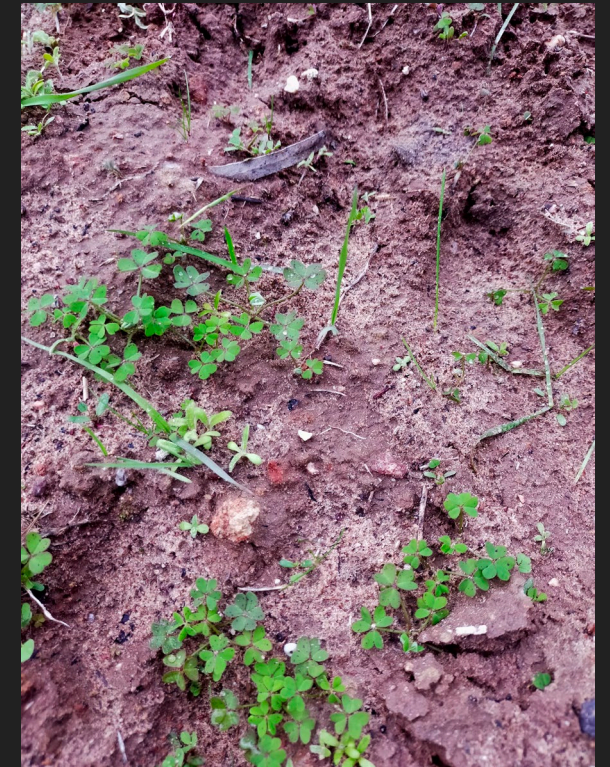


# Penfolds Soil management





# Penfolds Soil Management





# Penfolds

# Old Vines 1888



# Hither & Yon

# Mclaren Vale

- Regen
- Mow undervine and interrow cover crops in Autumn
- Looking at soil carbon to reduce environmental stress from water
- Changing Varieties from Bordeaux and Shiraz to Southern Italian and Spanish Varietal
- Adelaide Recycled water is the main source of water.
- Uses solar power for irrigation and sheds. 2-3 year payback.



# Hither & Yon

# Varieties



- 1.1 ML/Ha
- Cab Sauv and Shiraz produce 4 t/ha
- Fiano and Nero crop at 7-8t/ha with a better acid at harvest.
- Tempranillo, Touriga, Aglianico, Montepulciano, Greco, Vermentino



# Water Usage Comparison

- New Zealand Irrigation reasonable use database (Irricalc)
  - November –March 5 month, 21 weeks = 3.5 ML/ha. Free!
- South Australia
  - 1.1 ML/ha Annually water allocation at a cost of \$1,400 / ML

# Heat Wave

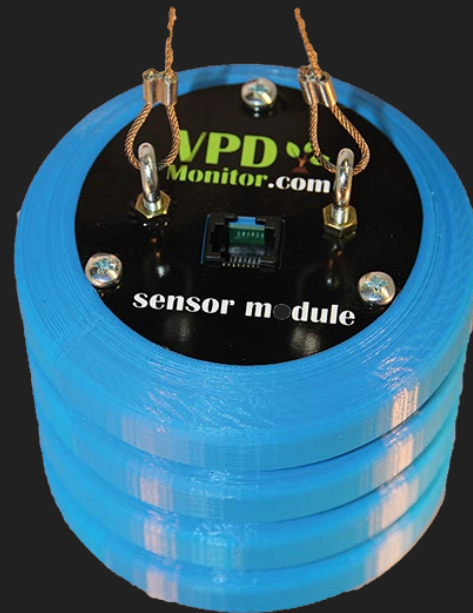
- 20-30% crop loss in a heat wave
- Temp does not go below 24 C
- Can last for Days

# Heat Wave Tactics

- Pre Irrigate blocks
- Rolling 15min irrigation in all blocks.

# Measurements

- Soil Moisture ( Sentek, CropX )
- IR
- Vapor pressure deficit
- Bunch weight
- Trunk Diameter



# Interesting Info

- Grape Prices
- Vineyard Cost

# Barossa Grape Price

## ○ Penfolds Grape prices

○ A1	\$15000	Grange	\$1000
○ A2	\$8000	RWT, 707	\$850
○ A3	\$3800	389	\$120
○ B1	\$2400	Bin 28	\$45
○ B2	\$1850	Pepper Jack	\$20
○ C1	\$1500	(Not purchasing fruit at this Quality)	
○ C2	\$0	(Not purchasing fruit at this Quality)	
○ C3	\$0	(Not purchasing fruit at this Quality)	

# Barossa Vineyard Cost Premium Red 22

○ Pruning	\$2000
○ Vineyard Floor management	\$1000
○ Under Vine	\$1300
○ Canopy Spraying	\$1100
○ Foliage/ Crop Management	\$1000
○ Irrigation	\$1500 (Price increase in 23 , 24, Currently \$1400/ML)
○ Harvest	\$2750
○ Other	\$1750
○ Depreciation and Finance	\$3500
○ <b>Total</b>	<b>\$16,350/Ha</b>



Finish

