Targeting Wind Erosion with Oil Mallees and Saltbush

Project Snapshot

sustainable

agriculture

Land Manager's	Harry and Aaron
Name/s:	
Property Size:	3500 ha
Location:	Corrigin
Annual rainfall (mm):	360mm
Enterprise mix:	Cropping /sheep

Soil types/vegetation types:

Sand, Ioam

Above: Aaron Gayfer

Key Messages

- Trees can protect landscapes from wind erosion and provide numerous other environmental benefits.
- Trees can provide shelter and offer a feed supplement to livestock.

Gayfer

 Being sustainable doesn't mean diminishing traditional farm income sources.

This project is supported by Wheatbelt NRM, through funding from the Australian Government's Caring for our Country.

Their story

Active Corrigin Farm Improvement Group members, Harry and Aaron Gayfer, first learnt about the benefits of oil mallee belts and saltbush plantings on one of the group's annual bus tours many years ago. Seeing firsthand how their neighbours had been integrating landcare projects drove a desire to do the same. Planting about 3,000 trees a year became part of normal farm practice for the Gayfer family. "We try to apply for funding when we can to help reduce the financial cost of revegetating degraded land". Harry elaborated saying, "What makes funding invaluable is it allows you to trial different ideas before implementing them on a full farm scale".

Being successful recipients of Caring for our Country funding in 2010, Harry and Aaron decided to investigate how wide spacing's between oil mallee belts can be before they were no longer effective. "Farm sustainability also requires considering farm income, of which for us, cropping is the main component", Harry highlighted. "If done right I could see a real synergy on our undulating sands between cropping and tree planting". Using a one-pass tree planter in May 2010 the oil mallees were planted in 15m length, four row alleys. Alley spacing's were adjusted from 90 m down to 30 m. The narrower alleys were used on land that suffered from the greatest levels of wind erosion. The Gayfer's also received funding to plant saltbush in a saline and wind prone sand plain valley floor.

Over the last three years the family have planted:

- Approximately 36,000 oil mallee seedlings across 350ha of deep white undulating sand, and;.
- More than 20,000 saltbush across the once unproductive valley floor.



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Boosting farm sustainability

After a few years into the project, the Gayfer's have seen a significant reduction in wind erosion during the months of February to April, when soil blow can be more prevalent. Aaron said, "The visible difference of the landscape really makes you feel you're getting somewhere". They are confident that in the near future they will see a lowering water table, a decrease in water-logging and an improvement in soil condition. Apart from soil erosion, salinity is the number one concern for the Gayfer family.

The saltbush has also allowed higher stocking rates due to the feed benefit to sheep during the autumn period. Plus requirements for hay have been reduced. "We would like to see research into the nutritional benefit of different saltbush varieties", Aaron said.

Future plans are to implement cell grazing where the oil mallees have been planted to improve sheep production. "Cell grazing will allow us to run the sheep on fresh pasture with the added benefit of shelter from the trees", Harry mentioned. The Gayfer family also hope to use the oil mallees for carbon credits and depending on the viability of the green energy industry, harvest them for power production.

Lessons learnt

The smaller belt spacing's proved to be more effective for controlling salt creep, while bigger belt spacing's (60 - 90m) allowed the Gayfer's to effectively reduce wind erosion but still undertake normal cropping activities. If the Gayfer's had the opportunity to participate again they would double the number of seedlings planted. "The next step will be linking wildlife corridors with saltbush and oil mallee plantings to boost the biodiversity in an area that is largely cleared for agriculture" Aaron mentioned. On the flip side, Harry pointed out that large plantings may restrict access to the property. This could create difficulty when fighting fires and obviously is something to keep in mind and address. He also mentioned that the trees have the potential to cause shadowing which can disrupt the satellite signal for the automated steering systems on their machinery.

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