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CLAYPAN REVEGETATION TRIAL 1991 - 1995

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INTRODUCTION

My interest in claypan revegetation started in 1991 with the formation of a Landcare group affiliated with the North Flinders Soil Conservation Board. At the time I was secretary of the Board and I wanted to demonstrate to other landholders what could be achieved with a barren claypan. My knowledge of planting native chenopods and keeping them alive was very limited. I experienced a lot of failures during my first year but gained a great deal from the exercise over the next few years.

The area chosen for the revegetation trial is within walking distance of the Depot Springs homestead, approximately 1 km. It's on a major road and has reticulated water from a natural spring. The water is 900 ppm (salt). The area is fairly flat and was devoid of vegetation. In the past it had been used to play cricket and football and for go-karting. No thought was given in those days (the '60s and early '70s) to planting some vegetation!

THE LEARNING PROCESS

During the mid '70s the area was contour furrowed using a grader. It's no longer clear what the precise motivation was for our change in attitude. It may have been my father's chat with a representative from the Department of Agriculture. While the furrows collected water and stopped a lot of runoff, there were no bushes of any description growing nearby, hence there was no seed source. We could see that seed needed to be introduced. At that time we believed that the chenopods growing in our area were in seed. In fact what we planted were the male flowers, not seeds. Hence, no germination.

After this initial failure little was done with revegetation work. It wasn't until I joined the local soil board that my interest was rekindled. During 1991 deep ripping was carried out on the claypan and bladder saltbush (*Atriplex vesicaria*) seed was hand broadcast over the area. Some of the bushes grew but many didn't survive. It became apparent that unless the plants had a decent root system they could not survive the dry times. Later in 1991 I was sent some old man saltbush seedlings. These were planted in July in various locations on the claypan in different soil types. If they survived they would provide shelter and protection for other plants, both from the sun and the wind. They did thrive and grow at a rapid rate, eventually flowering and seeding. Due to the success of the plantings and also runoff after rainfall, I decided to construct a levee bank to contain water within the claypan. This proved to be the turning point in the trial because it allowed the sub-soil to become saturated, allowing the plants to become established.

SUCCESS AT LAST

A variety of trees and shrubs are now thriving on this once bare area including quandongs (*Santalum acuminatum*), native apricot (*Pittosporum phylliraeoides*), native rose (*Gossypium sturtianum*), native pine (*Callitris glaucophylla*), red mallee (*Eucalyptus socialis*), river red gum (*Eucalyptus camaldulensis*), sticky hopbush (*Dodonaea viscosa*), low bluebush (*Maireana astrotricha*), old man saltbush (*Atriplex nummularia*), mealy saltbush (*Rhagodia parabolica*) and spiny saltbush (*Rhagodia spinescens*). I must stress at this point that nothing happens unless you make the effort and prepare yourself for some disappointments. I have called on many professional people over the term of this trial, asking questions and getting answers on such things as soil pH, seed viability and many other topics related to revegetation.

Many tourists and local landholders have taken a keen interest in the trial and the changes that have occurred over the past 4 years. Two field days have been held at the claypan, with the help of the North Flinders Soil Board. Signs have been erected at the site with funding support from the National Landcare Program. All work undertaken since 1991 has been documented and a photographic record has been kept.

CONCLUSION

I have made every effort to plant local trees and bushes; also ones that are palatable to stock as I believe these are the ones which could be eaten out by both domestic stock and feral animals, including goats and rabbits.

The claypan is now self-supporting and is used as a seed source for a variety of saltbushes including old man saltbush. However, as with everything there is always another side to consider. The native animals, specifically kangaroos and euros, have quickly adapted to a new environment with a new source of food and water. Therefore there is a need for management of native herbivore impact.

ACKNOWLEDGEMENTS

With the help and encouragement of my wife and several close friends, we beat the odds. I would also like to take this opportunity to thank the National Landcare Program, Department of Primary Industries, Port Augusta, other landcare groups and the myriad of people who have helped me; without their knowledge and understanding, the once barren eyesore would still be the same.