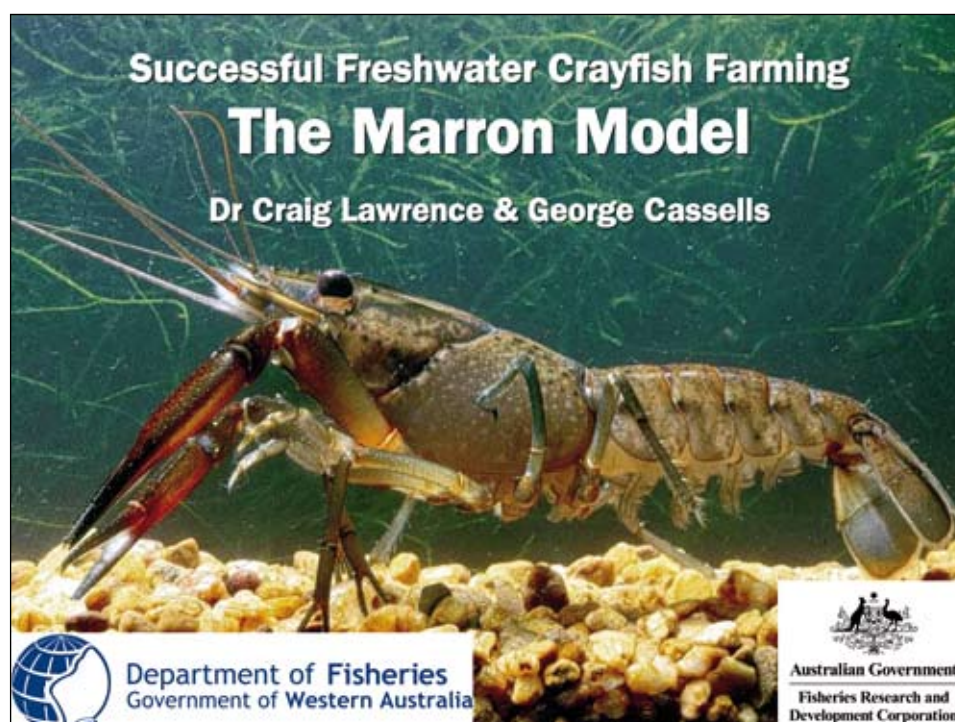


Appendix 3 Successful Freshwater Crayfish Farming – The Marron Model

A manual for farmers of methods for managing marron ponds to improve husbandry and genetics of farm stock.

Project team: C. Lawrence, S. How, G. Cassells and C. Bird

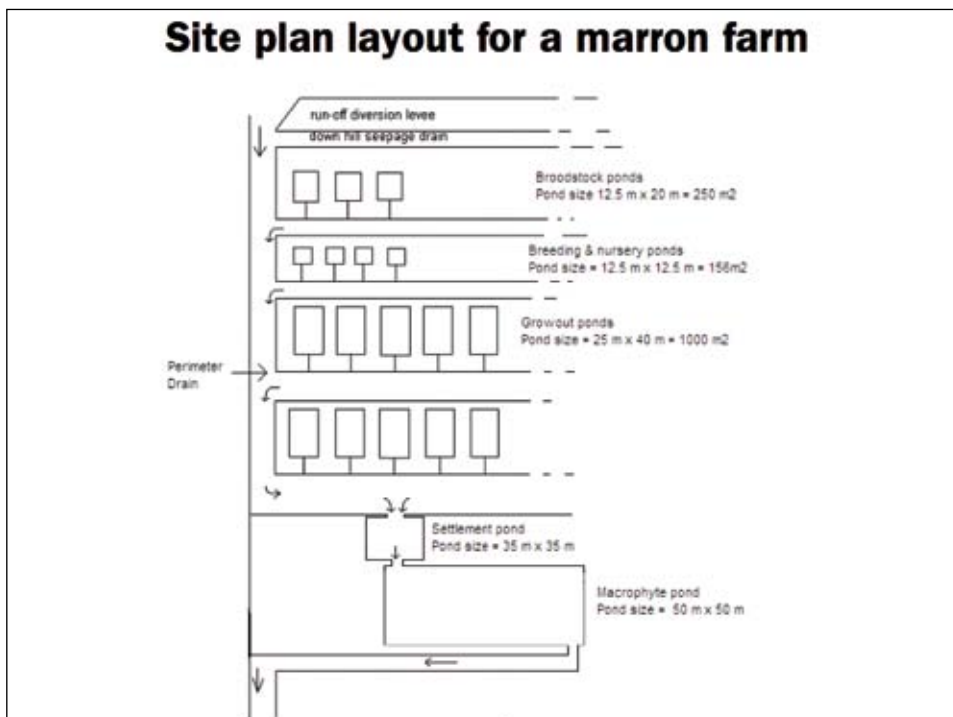


Slide 1. Successful Freshwater Crayfish Farming – The Marron Model. Dr Craig Lawrence and George Cassells.

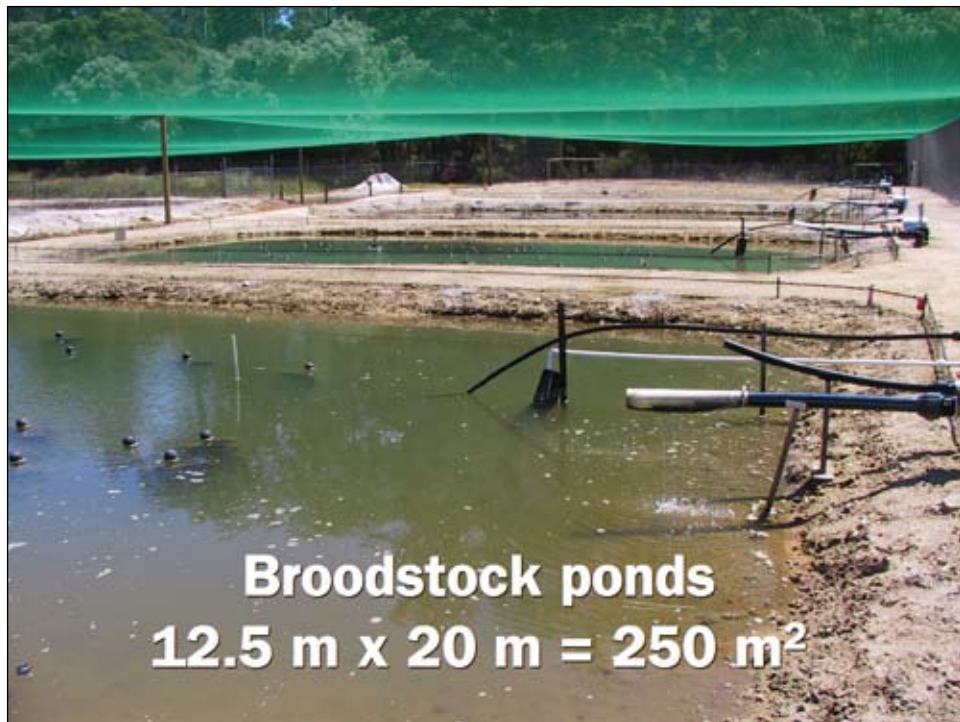


Build and manage your farm correctly

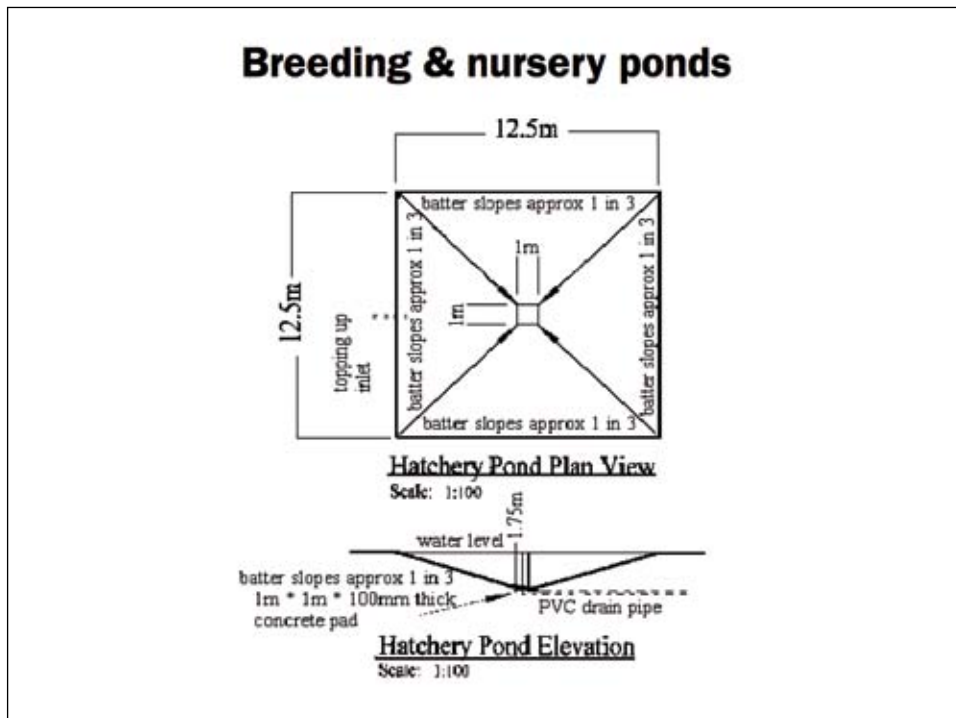
Slide 2. Build and manage your farm correctly.



Slide 3. Site plan layout for a marron farm.



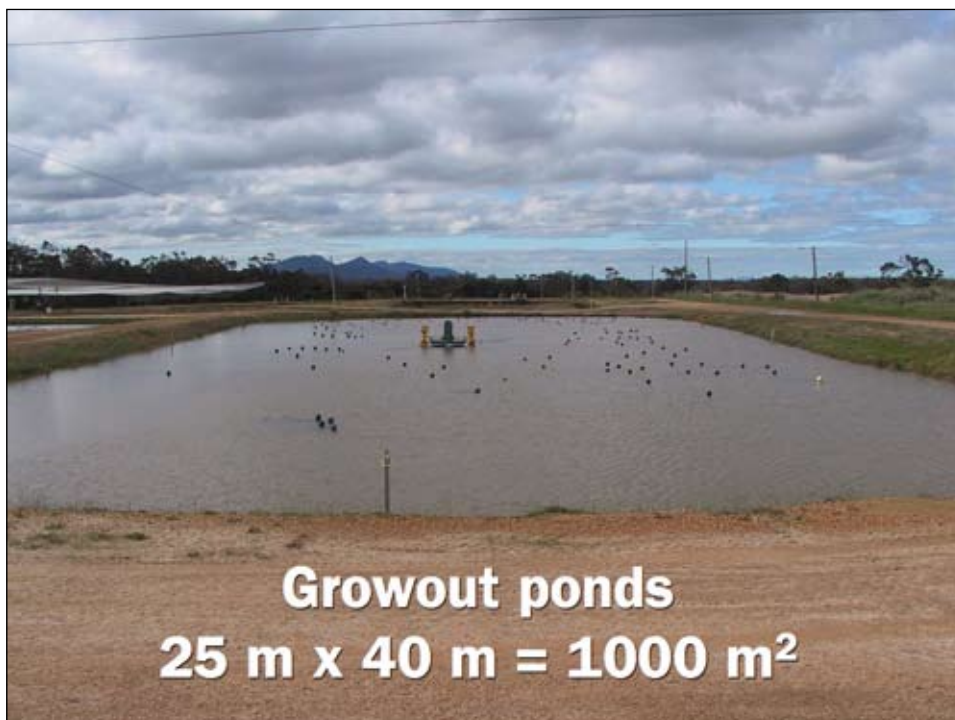
Slide 4. Broodstock ponds 12.5 m x 20 m = 250 m².



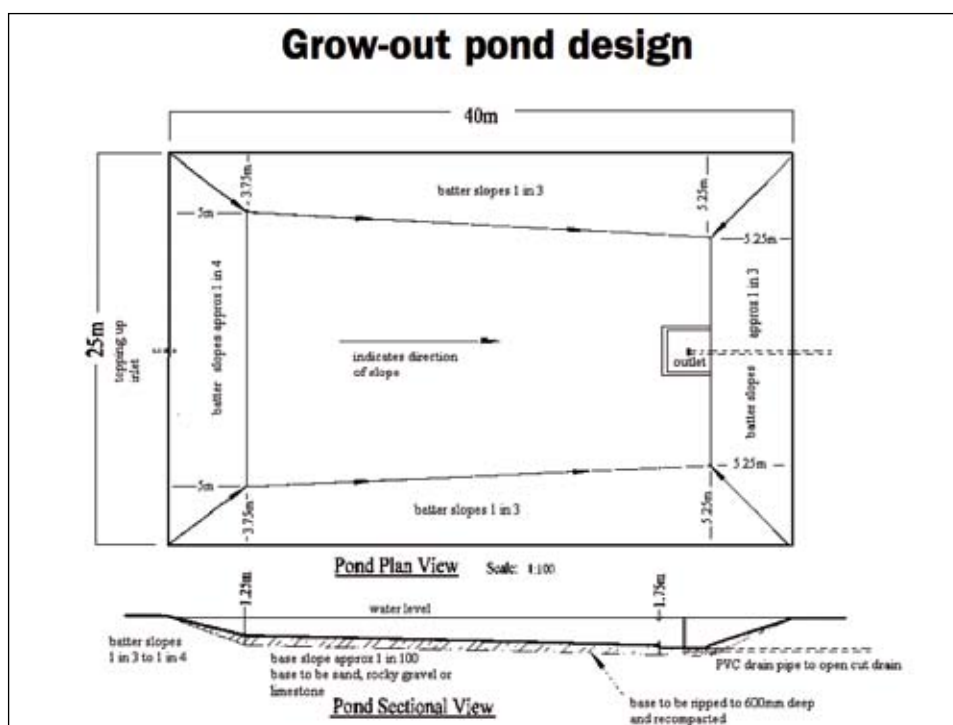
Slide 5. Breeding and nursery ponds.



Slide 7. Use venturis on broodstock, breeding and nursery ponds.



Slide 8. Growout ponds 25 m x 40 m = 1,000 m².



Slide 9. Grow-out pond design.



Slide 10. Use paddlewheels on growout ponds. Aerate ponds for 30-60 min three times per day at late afternoon (1600), midnight (2400) and dawn (0600).



Slide 11. Provide a water supply to each pond.



Slide 12. Install drain pipes in each pond.



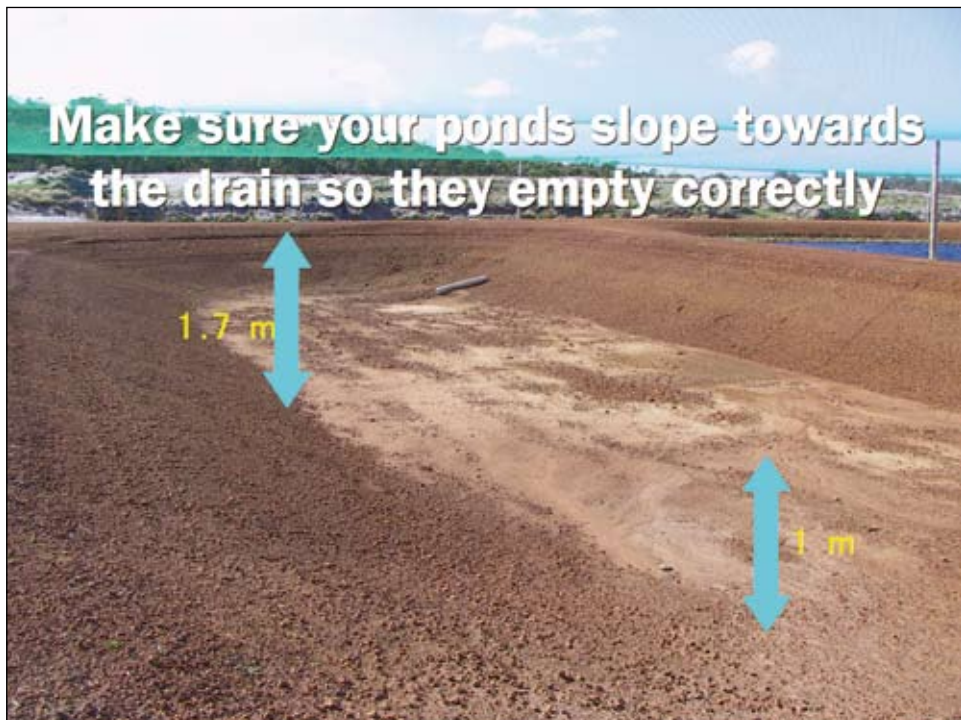
Slide 13. Install drain pipes in each pond.



Slide 14. Install a concrete harvesting base near the drain.



Slide 15. It will make harvesting much easier.



Slide 16. Make sure your ponds slope towards the drain so they empty correctly.



Slide 17. If they don't slope this happens and you can't harvest your marron easily.



Slide 18. Compact the bottoms and line with gravel – they should be hard enough to drive on.



**Don't make you banks too steep.
Hard bottom ponds and a bike are
essential for easy harvesting**

Slide 19. Don't make you banks too steep. Hard bottom ponds and a bike are essential for easy harvesting.



**If you don't compact bottoms
this happens**

How can your marron survive in this?

Slide 20. If you don't compact bottoms this happens. How can your marron survive in this?



Slide 21. This pond could be improved by hard bottoms – How else can you harvest all your marron?



Slide 22. Install bird netting to prevent predation.



Slide 23. Marron hides are simple to make.



Slide 24. Use hides (150 hides/1000 m² pond).



Slide 25. Provide good access to ponds – It certainly makes feeding easier.



Slide 26. Feed marron pellets daily.

Average marron feed rates for Pemberton

		Aug	Nov	Feb	May	Aug
	Water Temp °C	12.2	19.2	22.5	13.4	12.2
0+ - 1+	Feed as % BW/Day	4.9	3.6	1.8	0.7	0.4
	Feed as g/m ² /week	6.8	14.7	20.1	12.0	8.1
	Marron Mean Weight g	4.7	13	35	58	71
1+ - 2+	Feed as % BW/Day	0.4	1.5	1.1	0.6	0.5
	Feed as g/m ² /week	9.9	29.7	30.1	20.3	16.0
	Marron Mean Weight g	81	95	126	169	175

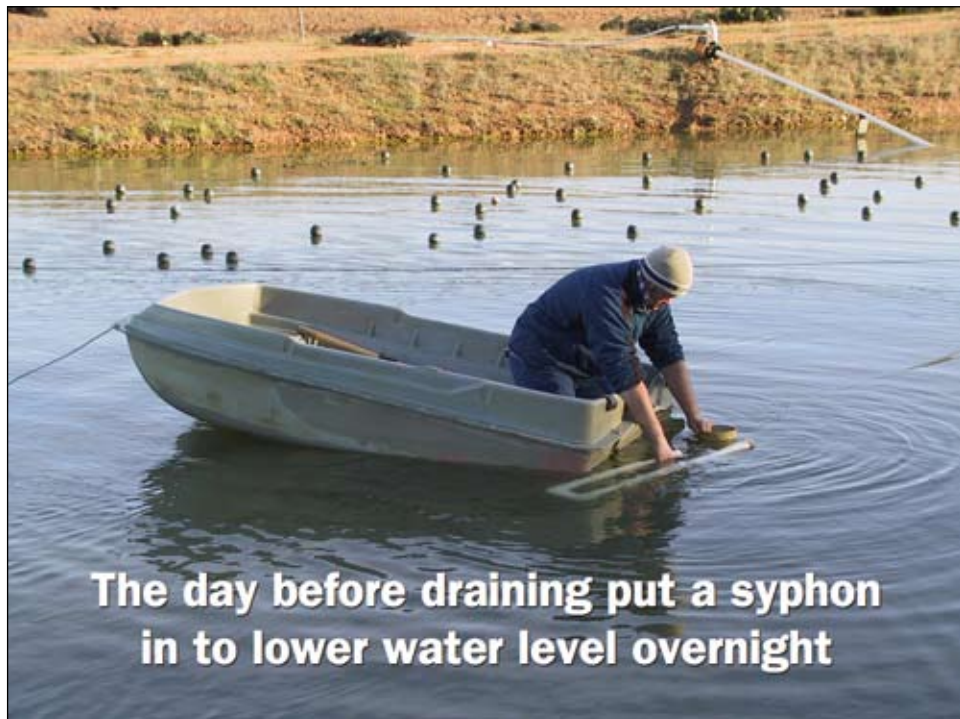
Slide 27. Average marron feed rates for Pemberton.



Slide 28. Marron farming cycle.



Slide 30. Drain ponds in the morning when it is cool.



Slide 31. The day before draining put a syphon in to lower water level overnight.



Slide 32. Syphons are a cheap and simple way to lower water levels.



Slide 33. Overnight the syphons will have lowered the water level to around 1m at the deep end.



Slide 34. Remove hides before completely draining the pond.



Slide 35. When draining ponds let the marron come to you.



Slide 36. They will follow the water down.



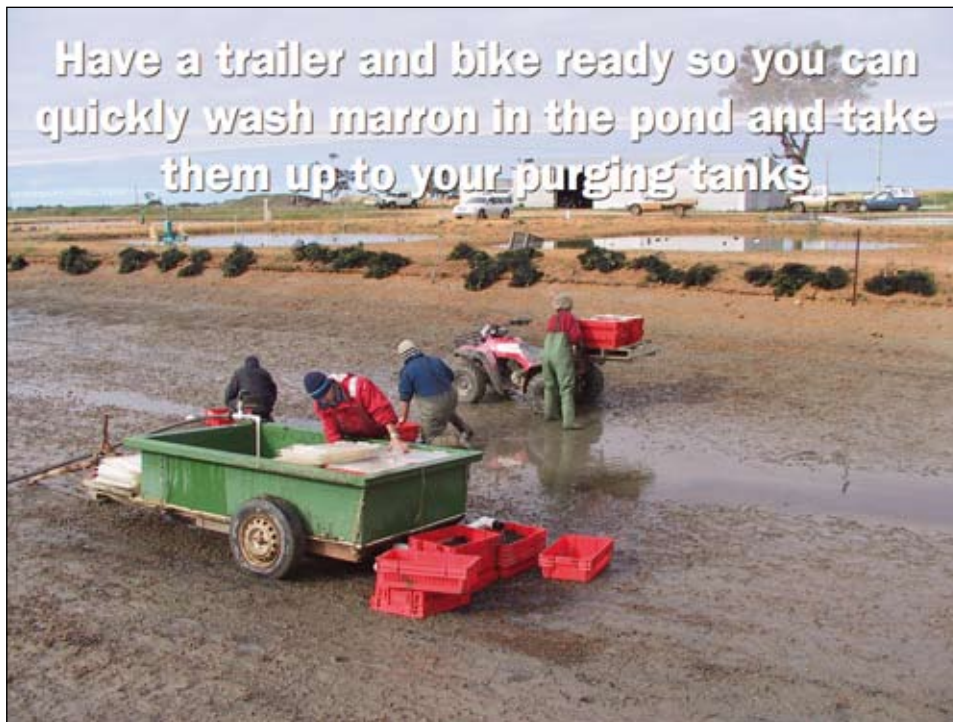
Slide 37. Until they all congregate around the screen.



Slide 38. Isn't harvesting easy when you have a drain?



Slide 39. Now it's just a simple matter of picking them up.



Slide 40. Have a trailer and bike ready so you can quickly wash marron in the pond and take them up to your purging tanks.

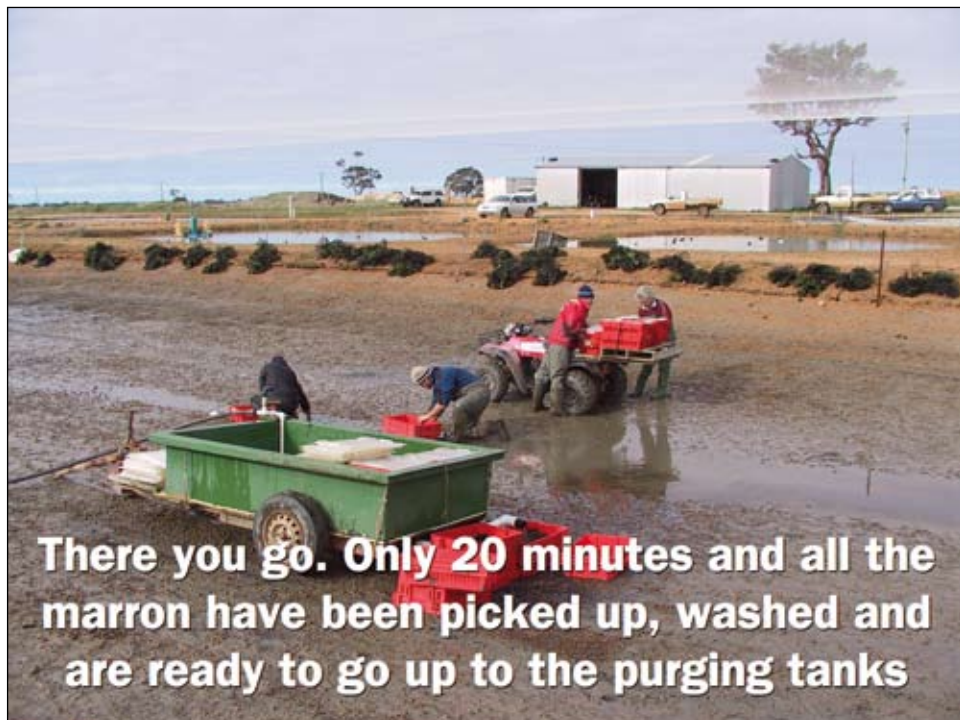


Slide 41. A trailer with water supply makes washing marron easy.



After a quick wash to get the mud off they are ready to go into your purging tanks

Slide 42. After a quick wash to get the mud off they are ready to go into your purging tanks.

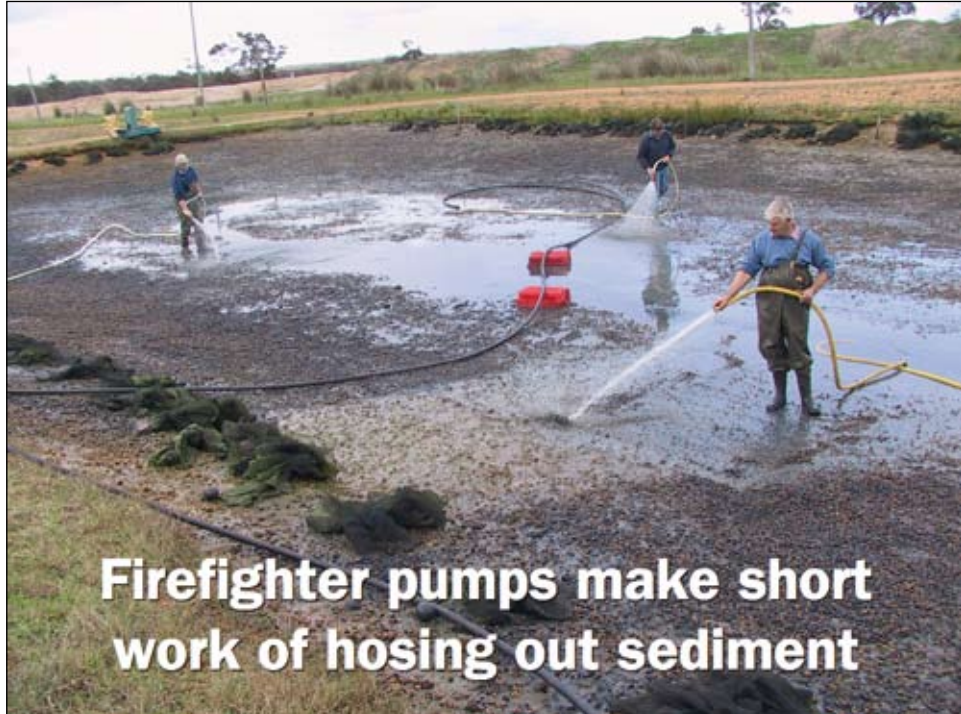


There you go. Only 20 minutes and all the marron have been picked up, washed and are ready to go up to the purging tanks

Slide 43. There you go. Only 20 minutes and all the marron have been picked up, washed and are ready to go up to the purging tanks.



Slide 44. After draining, hose down the sludge from the pond.



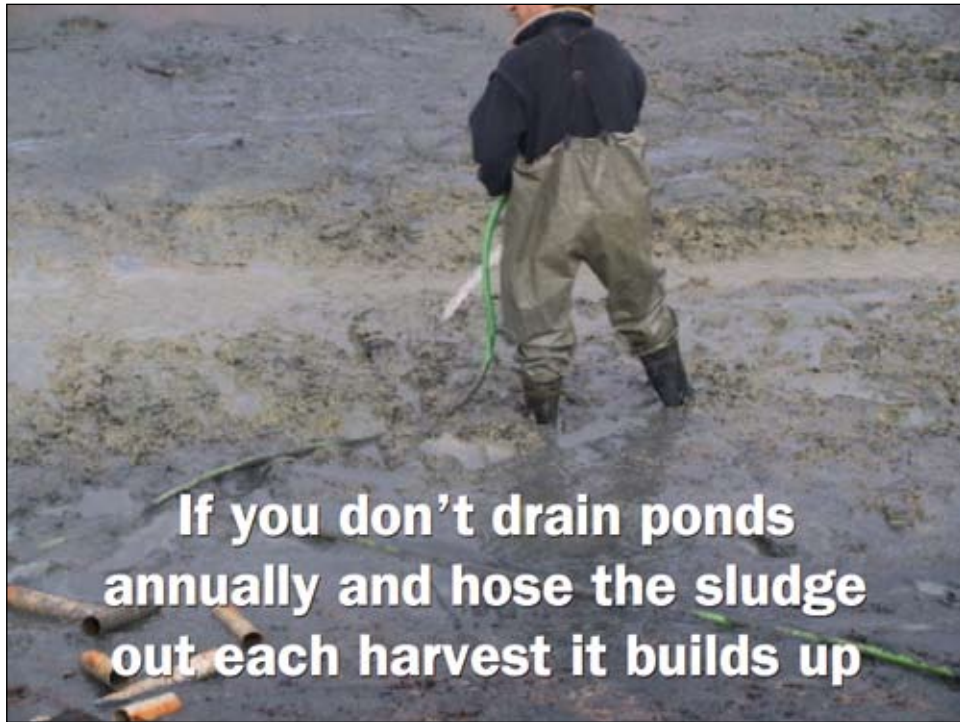
Slide 45. Firefighter pumps make short work of hosing out sediment.



Slide 46. After most of the sludge is gone, sprinklers can finish the cleaning. Isn't harvesting easy with hard bottom ponds?



Slide 47. Cleaned and ready to fill for your next crop.



Slide 48. If you don't drain ponds annually and hose the sludge out each harvest it builds up.



Slide 49. Use purging tanks to gill flush your marron immediately / after harvest.



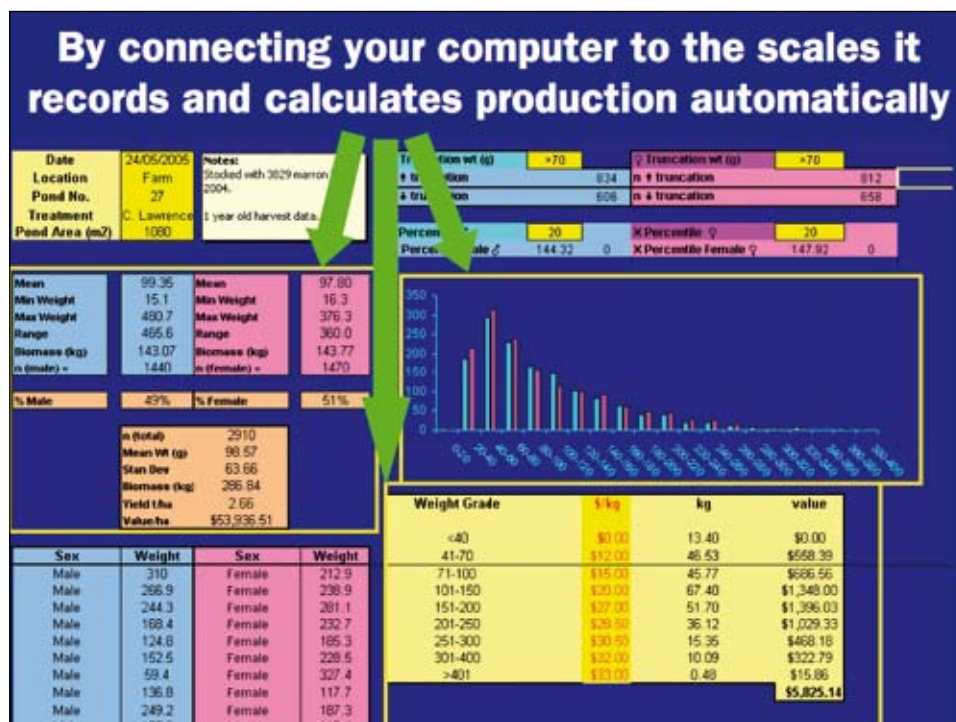
Slide 50. Make sure your purging tanks are well aerated with a venturi.



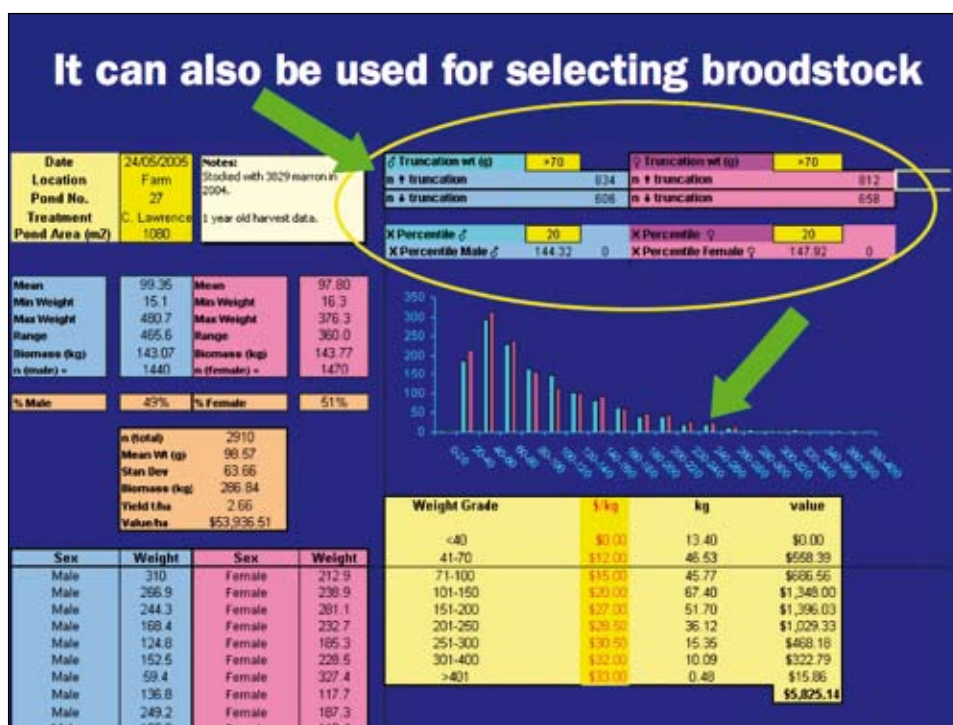
Slide 51. Record the weight of your crop so you can manage production and marketing.



Slide 52. We developed computer software to make data recording easy on commercial farms.



Slide 53. By connecting your computer to the scales it records and calculates production automatically.



Slide 54. It can also be used for selecting broodstock.



Slide 55. Now just pack and grade your crayfish for market.



Slide 56. George, Sandy, Carey, Chris B., Craig, Chris C.



Slide 57. Acknowledgements: We wish to acknowledge the generous assistance of the marron farmers who worked with us on this project.