



WEBINAR 2 – SHANE JOYCE SPEAKER NOTES

HOW DO WE PRACTICALLY REGENERATE OUR SOIL HEALTH?

SLIDE 1.

SHAN & SHANE JOYCE, DUKES PLAIN, THEODORE. Q 4719

WHERE: DUKES PLAIN IS 30 KM SOUTH OF THEODORE IN THE SOUTHERN QUEENSLAND BRIGALOW BELT.

WHAT: DUKES PLAIN HAS CERTIFIED ORGANIC BEEF CATTLE BREEDING & FATTENING ENTERPRISES, ALONG WITH NON-CERTIFIED BEEF CATTLE FATTENING, BACKGROUNDING, & TRADING ENTERPRISES.

HOW MUCH: DUKES PLAIN IS 7900 HA, OF WHICH 3500 HA IS USABLE FOR AGRICULTURE, 300 METRES ASL WITH 700MM AVERAGE ANNUAL RAINFALL.

SLIDE 2.

START: WE TOOK UP MANAGEMENT OF DUKES PLAIN IN 1982. SOILS & PASTURES WERE DEGRADED, & TIMBER REGROWTH WAS ABUNDANT.
WE SET A GOAL TO HAVE **SOILS IN BEST POSSIBLE CONDITION.**

SLIDE 3.

ADVICE: MUCH OF OUR EARLY ADVICE WAS THROUGH READING (PERMACULTURE TWO BY BILL MOLLISON, THE ONE STRAW REVOLUTION BY MASINOBU FUKUOKA, WATER FOR EVERY FARM BY P.A. YEOMANS, ALEX PODLINSKY'S BIODYNAMIC LECTURES).

SLIDE 4.

1993 I ATTENDED THE GRAZING FOR PROFIT WORKSHOP RUN BY RESOURCE CONSULTING SERVICE. THIS WORKSHOP WAS PRESENTED BY STAN PARSONS & TERRY MCCOSKER. FURTHER "ADVICE" WAS RECEIVED THROUGH ATTENDING OTHER RCS WORKSHOPS & FIELD DAYS, AS WELL AS LANDCARE WORKSHOPS & FIELD DAYS.

SLIDE 5.

MISTAKES: RE-PHRASED AS LEARNING OPPORTUNITIES!

RE-CLEARING LAND WITH TIMBER REGROWTH (SOME 800 HA) FOR GRAIN CROPPING, THINKING WE WERE IMPROVING THE LAND. THIS LAND IS NOW PRODUCING AN AVERAGE OF \$20 PER HA PER YEAR GROSS MARGINS LESS (18 YEARS OF YIELD DATA) THAN SIMILAR LANDTYPES THAT WERE NOT RE-CLEARED.

INADEQUATE & POORLY PLANNED WATER SYSTEMS WERE INSTALLED AS WE DID OUR CELL GRAZING DEVELOPMENT. THIS HAS NOT ONLY RESULTED IN INADEQUATE WATER TO SOME PADDOCKS, BUT ALSO EXTRA EXPENSE INVOLVED IN REPLACING WITH ADEQUATE INFRASTRUCTURE.

SLIDE 6.

WHAT HAS WORKED WELL:

- **BIODYNAMICS.** THE USE OF THE BIODYNAMIC PREPARATIONS WAS ONE OF THE MEASURES WE INTRODUCED LATER INTO OUR LAND MANAGEMENT (2002). OUR EXPERIENCE HAS BEEN THAT IF WE WERE TO “DO IT ALL AGAIN” THEN BIODYNAMICS WOULD BE ONE OF THE FIRST TOOLS WE WOULD USE. I HAVE WORKED WITH OTHER FARMERS (CROPS & LIVESTOCK) & SEEN RESULTS IN 6 MONTHS WITH BIODYNAMICS THAT TOOK US 3 YEARS TO ACHIEVE WITHOUT BIODYNAMICS!

SLIDE 7.

- **CELL GRAZING.** THE INTRODUCTION OF CELL GRAZING IN 1993 HAS CONTRIBUTED TO SPEEDING UP THE POSITIVE CHANGES IN OUR LANDSCAPE.

SLIDE 8

- **MONITORING:** WE NOW HAVE OVER 18 YEARS OF GRAZING CHARTS & FIXED POINT PHOTO RECORDS. THESE ARE INVALUABLE WHEN IT COMES TO MAKING “DEVELOPMENT” CHOICES ON THE PROPERTY. WITHIN 6 MONTHS OF STARTING TO KEEP GRAZING CHARTS WE WERE ABLE TO IDENTIFY THAT HEAVILY TIMBERED COUNTRY (WHICH WE WERE PLANNING TO DO FURTHER RE-CLEARING ON) WAS IN FACT OUT
- **SLIDE 9.** YIELDING RE-CLEARED PADDOCKS! WE CAN NOW LOOK AT YIELD FIGURES AVERAGED OVER 18 YEARS TO COMPARE RETURNS FROM PADDOCKS/LAND TYPES WITH DIFFERENT TREE DENSITIES/CANOPY COVER. THIS DATA OVER A COMBINATION OF SEASONS (WET & DRY) IS VERY POWERFUL FOR FUTURE FARM DEVELOPMENT & MANAGEMENT PLANNING.

SLIDE 10.

BENEFITS:

- **INCREASED CARRYING CAPACITY.** MATCHING STOCKING RATE TO CARRYING CAPACITY HAS RESULTED IN BOTH LANDSCAPE HEALTH IMPROVEMENT, BETTER ECONOMIC RETURNS.
- **WATER USE EFFICIENCY.** BETTER USE OF RAINFALL THROUGH IMPROVED RAINFALL INFILTRATION RATE. A LENGTHENING OF THE GROWING SEASON (SOIL STRUCTURE & WATER HOLDING CAPACITY) & SHORTENING OF THE NON-GROWING SEASON HAS RESULTED IN BETTER ANIMAL PERFORMANCE.
- **ROOT DEPTH:** WE HAVE MEASURED GRASS ROOTS DOWN TO 1.7 METRES. PASTURE HEALTH & DIVERSITY HAVE IMPROVED & THE DEEPER ROOTING OF PLANTS EFFECTIVELY MEANS WE ARE FARMING IN MUCH MORE SOIL, WHICH MEANS MORE AVAILABLE MOISTURE FOR PLANT GROWTH.
- **SOIL STRUCTURE:** SOIL ORGANIC MATTER IS UP TO JUST OVER 4%, WHILE DISTRICT AVERAGE IS 1% OR LESS. THIS LEADS TO HEALTHIER & MORE DIVERSE SOIL BIOLOGY, MORE BALANCED SOIL NUTRIENTS, GREATER WATER HOLDING CAPACITY, & INCREASED RAINFALL INFILTRATION RATES.
- **DIVERSITY OF FAUNA & FLORA:**
- **EASE OF STOCK HANDLING:**
- **LESS STRESS:**

SLIDE 11.

TAKE HOME MESSAGE:

- WHEN CONTEMPLATING CHANGE (SAY CHEMICAL FARMING TO BIODYNAMICS) MAKE A **TRANSITION** RATHER THAN “GOING COLD TURKEY”. OFTEN BUSINESSES CAN SUFFER FINANCIALLY WHILE WE LEARN A NEW METHODOLOGY. I CAN NOT STRESS ENOUGH THAT WE MUST REMAIN FINANCIALLY VIABLE, SO IF WHAT WE ARE DOING KEEPS THE \$'S ROLLING IN & WE WANT TO CHANGE, THEN INTRODUCE THE CHANGE ALONG WITH “BUSINESS AS USUAL’. THEN BUSINESS AS USUAL CAN BE PROGRESSIVELY REDUCED AS WE BECOME MORE PROFICIENT WITH THE NEW METHODOLOGY.
- **ECONOMICS** OF ACTIONS. ALWAYS EXAMINE THE ECONOMICS OF YOUR FARMING OPERATIONS. ENSURE THAT WHILE YOU ARE RE-GENERATING YOUR SOIL HEALTH, THAT YOUR FINANCIAL HEALTH IS ALSO BEING RE-GENERATED!
- **VISION & GOALS**: FROM THE BEGINNING WE NEED TO “HAVE THE END IN MIND”. THAT IS WE NEED TO SET GOALS FOR WHAT WE WANT TO ACHIEVE. OUR GOAL “**TO HAVE SOILS IN BEST POSSIBLE CONDITION**”, HAS BEEN LIKE THE PROVERBIAL “RING IN THE STUD BULLS NOSE” THAT HAS LED US TO WHERE WE ARE NOW & WHAT WE HAVE ACHIEVED!
- **INVOLVE ALL IN BUSINESS**: I CAN NOT STRESS ENOUGH THE NEED TO HAVE ALL PLAYERS IN THE GAME “SINGING FROM THE SAME PAGE”>
- **IDENTIFY WEAK LINK**: IF PROFITABILITY/PRODUCTION IS THE WEAK LINK IN THE BUSINESS THEN IT IS NO USE RE-HABILITATING SOME UNPRODUCTIVE LAND, WHILE WE HAVE PRODUCTIVE LAND THAT CAN BE MORE EFFECTIVELY MANAGED FOR BETTER PRODUCTION/PROFIT OUTCOMES.
- **TREAT CAUSES NOT SYMPTOMS**.