

DEVELOPMENT OF COMMERCIAL MACHINERY AND THE FARM

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We formed the company Multi Farming Systems to market our agricultural products to fulfil the needs of the Australian farmer well into the 21st century. Our slogan is 'Setting the standard for long term, cost effective, viable farming systems and probably, the heart of system is the equipment that we can make to suit individual farmer's needs into tramline permanent bed and roadway situations. We make 11 different agricultural, high performance, low maintenance, trouble free machines.

Just last January, we installed a dealer network throughout Australia, which is now giving us Australia wide exposure. We find out what the farmer needs for his individual property and design machinery to suit these needs. We are able to advise on just what is possible. One of a few options that are available is Controlled Traffic, Banana Farming Company style.

The concept of controlled traffic can take on many forms. We have the situation, in Australia, where the furrow irrigation farmers drive down the same set of wheel tracks all the time. That is a form of controlled traffic if they don't disc offset the whole field to eradicate cotton or other crop roots that happen to be there. If this is done, then it is normal cultivation farming.

Cotton farmers are leading the way with the largest number of farmers using the same furrows year after year. This practice can be called controlled traffic. If they are working with all 8 metre equipment, everything matches.

For controlled traffic in broadacre cereal crops, farmers need to change from intensive farming to no-till farming. For this, the farmer only needs a boomspray and a no-till planter both the same width. It is this concept that has had the industry exploring the possibility of gantry modules etc. to keep everything on the same wheel tracks.

The gantry concept, we believe, will not be the way to go in its present presentation. A multiple gantry concept has very little traction capacity for load requirements of ground engaging equipment. We had decided to use the Multiplanter frame concept to be the host frame for controlled traffic application. The farmer pulls the machine, whether it be 8 metres or 32 metres wide with the tractor size of his choice. We are not discarding the possibility that the farmer may want to self propel these planter frames for some jobs, such as carrying cotton picking or stripping heads on them, or carrying cotton mulchers under their frames.

At present, we make and use these controlled traffic Multiplanter frames at whatever width required and pull them with a tractor and precision steer them to follow accurately their tracks constantly.

The run down below of what we have done on Honey B Ranch from being a raw scrub property right through to farming tramline no-till to future irrigation is to show you how, when pressures come on farmers, changes take place to survive and improve.

Below is a quick explanation on how I started on the property we call Honey B Ranch. This property is the base for both businesses that have complemented each other over the years.

In 1959, I drew my property as a brigalow scrub block surveyed off at 830 hectares. This block is nearly a square with the Police Camp Creek being the South Eastern boundary. The land fall is in all four directions. We have no run off from neighbours. The crest of the property has only about 1 metre fall over a kilometre of distance, running lengthwise and parallel to the north western boundary. One third of the property was whipstick brigalow, melon hole country - very clayey soil.

The Government of the day put 13 blocks here up for selection to be developed as dairy farms. Thus, we had a fight on our hands when we applied for a loan from the QIDC (The Agricultural Bank) to pull the scrub and develop the whole property into a broadacre grain farm. Within 5 years, we had the whole property ploughed up and growing wheat, barley, sorghum and dryland cotton.

We farmed our land 6 to 7 times, including planting each year. We had some good crops, but a few of them failed to make it from the lack of rain to put down the secondary roots of cereal crops.

We noticed the farmers on the Darling Downs starting to build ring tanks (or water storages) to catch the overland water flows and to pump out of rivers. This gave us the idea to do something for ourselves. The situation of our Police Camp Creek is such that, if we construct an earth dam wall 8.5 metres high and 1,260 metres long using 400,000 cubic metres of soil, we could hold approximately 2,200 megalitres of water.

We estimated that, as we went through the motions of trying to grow a crop each year by working the soil 6 times, buying seed then planting it and some years harvesting nothing or 2 bags per acre, then the cost of watering once to enable the surface roots to reach the good subsoil moisture and harvest 10 bags per acre, wasn't a bad idea. Then, if we watered again at flowering time to boost the yield to 20 bags per acre, that was all extra income from the applied water.

So, we figured that this water storage was the way to go. Diesel was about 19 cents per gallon (4.3 cents per litre) at the time. By the time the Water Commission had granted our licences to build an earth dam, and 4 pump site licences etc., 4 years had elapsed and Malcolm Fraser had imposed World Parity Fuel Pricing. Then we had interest rates that eventually, for us, increased to 22.8%. A further blow was the crash of world grain prices.

All the above hassles seemed to block us from progressing and we were worried how to keep farming. With the high use of fuel, the cost of labour and the soil being constantly bombarded by farm machinery of all descriptions (tynes, discs etc.) we started to rethink everything.

We had noticed the condition of the soil in the virgin scrub areas. Covered as it was with twigs, old leaves and trash, it seemed to stay soft and fluffy and to absorb the rain well. We decided to grow our crops the same way.

By this time, we were building farm machinery commercially for all over Australia. The no-till, precision depth type planters that we had designed and were selling over a wide area, proved to be the right machine to be the host frame for what we now call tramline farming.

That season, we were spraying dryland, skip 2 cotton rows, planted in 8 metre increments. We were spraying three and a half 8 metre widths with our approx. 28m boom spray. The next season, we built a new version of boom spray that would spray an even four 8 metre swathes of cotton. While doing this, we noted varying row widths on the guess rows and thought it would be a good idea to build a Multiplanter 32 metres wide, seeing that we only have to plant 16 rows on skip 2 cotton. So, we made the planter and put rear steering on it, so, not only could we plant with it, but we could use the modular frame to shield spray the rows of cotton and also we could carry water tanks on the ends and pull paddle dyke chains etc. Our chemical costs were halved with this method.

Today, our farm is premarked out to 84 tramlines running parallel to the longest (North Western) boundary. It takes 4 x 10 hour days to cover the property using 264 gallons (1200 litres) of distillate, travelling at 4.3 mph. Our tractor is 275 hp throttled back.

Since we started tramline farming, we now call our farming operation opportunity cropping. We plant cotton in November to January if there is enough moisture to get a good strike. Then, if it rains, the crops grows and we pick it. If there is good rain, we can plant barley into the standing cotton bushes, then slash the bushes. One year, we had the barley 6 inches high while we were still picking cotton. Crops can overlap sometimes.

Up to this point, we felt we had progressed quite well with probably 60 to 75% savings in fuel. There was one planting per crop twice per year, sprayed Sprayseed @ 1 litre per hectare(using rainwater only) to kill weeds before planting, shield sprayed the cotton in 4 days with Sprayseed or Roundup etc., then sprayed the barley with 2, 4 D to control turnip and cotton regrowth.

These last 4 years of drought at Banana have made us reconsider the concept of irrigation from the creek storage mentioned earlier. We are trying to get started immediately with the earth works. We'll need to flood for now with layflat hose a right angles to our tramlines down the slopes both sides of the crest of the farm where the main water channel will be.

We have observed the improvement to trickle irrigation buried 15" or 1/2 metre under the soil. We envisage burying all our huge water mains and the sub mains at right angles to the existing tramlines. Then the trickle hoses will go in along the tramline. We will delete the trickle hoses under the tractor tracks of the tramline, so that we have hard, dry and weed free roadways.

That will then place the property at its best long term condition for the future, producing profitable crops leaving the trash on top. As this property is a plateau, we collect all the runoff - any silt that moves will always end up in our storage dam. Over the years ahead,

we'll be able to cart the silt back and put it on the bad clay areas that have been exposed when levelling the melon hole areas.

Summary of the Above

No till makes it easier to tramline, looks after the soil, cuts fuel, machinery etc. costs and makes it possible for wide widths to be achieved per horsepower requirement, thus using less wheel tracks (tramlines).

With the trickle irrigation, it eliminates furrowing up, and allows all the trash to stand on the field, while still being able to water extremely efficiently and with nearly 50% saving in water use over flood watering.