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Replacing farm machinery

By R. Crossman*

In talking of machinery replacement it seems implied that the replacement items of plant are bigger and therefore better than their predecessors. It is also implied that plant replacement is becoming more costly. However in many instances this bigger and more expensive replacement plant has resulted in no more wheat being harvested and little improvement in output at seeding time.

I am continually amazed at the work output that different farmers can extract from similar sets of plant. Up to 100 per cent difference in output using similar equipment is not uncommon. Also there are amazing differences in the size and value of equipment used to crop similar areas.

Before any decision to replace machinery, the reason for replacement should be carefully considered.

In my experience, although the most obvious reason for replacing machinery is that it is worn out, it is seldom the main reason. The quantity of good second-hand machinery is further evidence of this.

Increasing the area to be cropped by buying additional land or increasing cropping intensity often means existing plant is replaced or increased by additional units.

The inability to find and keep suitable labour is another reason for changing plant.

Since 1973, plant has been replaced because good crops provided surplus funds and the opportunity to upgrade plant was taken. In some cases it has been too easy to justify those purchases; it’s no problem to think up reasons why an item of plant should be replaced if you can afford to write out the cheque.

However the judicious out-of-season purchaser also purchases when funds are available, and many effective and economical plant changes are engineered from this strong position.

The taxation advantage is not as good a reason today as it was with 40 per cent investment allowance, and I have the feeling that in many cases, any taxation advantage may have been more beneficial to the salesman than to the purchaser.

An alternative

Rather than replacing plant to suit the job to be done, change the job to suit the plant available. This may give some immediate, and considerable long term benefit.

Three simple principles apply:

• Work the ground less.
• Match the labour to the plant.
• Work the plant full time.

Cultivation

The only reason for cultivating is for killing weeds. For centuries cultivation was the only method of weed control and today may be still the cheapest method of controlling weeds. However if cultivation is not killing weeds or sowing the crop, or both at the same time, then there is reason to seriously question it. This is a significant step towards reduced cultivation in the cropping programme.

By overseas and eastern States standards, we do not cultivate much now. However, one less working considerably reduces soil disturbance. The attendant savings in labour, depreciation, and personal pressure at a critical time is startling.

But the main effect of actively reducing cultivation is the longer term effect of less damage to soil structure. In the Dowerin area, there are examples where these techniques have been applied for the last eight to ten years. The effect is cumulative with the soils becoming easier to work.

Most of today’s heavy problem soils throughout the wheatbelt were once the best and most consistent grain-producing soils. However traditional cultivation has been one of the main contributors to their present state. Because they are hard and difficult, they are ploughed or cultivated with an early rain. Because they are dug up early, there is good growth of weeds making necessary additional cultivations for weed control.

Everything we have been doing with these soils perpetuates the problem. A different approach is possible — break the cycle, work it less and redevelop soil structure.

Match labour and plant and work the plant full-time.

These two principles, matching labour and plant and working plant full-time, are linked together. It may be cheaper and easier to employ more labour at seeding than to replace plant with bigger gear. Many farmers do not agree but I know of many instances where farmers have changed to bigger gear and now appear to be under a greater workload themselves.

Enough labour should be employed to keep the plant going full-time. Our system is based on growing crops within the limits of available moisture, so the job should be done at the most opportune time.

Plant replacement

What I have outlined is a different approach to machinery replacement. These methods can improve soil structure with resulting lower draught and power requirements. Direct drilling is an important part, and new chemicals are opening up previously unimagined possibilities.

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