



Burnett Mary REGIONAL GROUP

Practical Solutions for Natural Resource Management

Property fencing

Planning and location

Fencing is a significant investment on any property and comprises a large portion of the capital expenses. Despite the size of the spend on fencing there is often insufficient time spent planning the most effective and efficient placement for the new investment.

How do I plan internal fencing?

Begin by gathering all the information that may influence the fencing layout. A plan capable of showing this information is readily obtained from satellite imagery.

The main natural features of the property should be plotted. The most important are:

- Land types
- Major ridges
- Water courses and well defined depressions
- Areas requiring special treatment e.g. stony, wet or eroded areas.

Existing improvements also have to be considered. The main ones which should be recorded are:

- Buildings and yards
- Internal and external access roads
- Existing fencing

- Watering points including dams, bores, water holes and sites for future watering points.

The availability and distribution of water points and the number of paddocks required to allow adequate segregation of the herd are important factors in determining sub-division.

In planning fencing, the tendency often is to fence according to the geometric pattern which happens to look good on a flat sheet of paper. This approach can often lead to serious land deterioration from erosion caused by badly located fence lines.

If fences are badly placed they can cause erosion by influencing:

- a. Limits of cultivation
- b. Access track position
- c. Fire break positions
- d. Some stock pad positions

All four of these factors can concentrate natural water flow and cause serious erosion.

Fence location

Principles

In the past, fencing was often erected strictly on some geometric pattern. In most cases, no account was taken of differing soil types, pastures, topography or water availability.



With more intensive use of resources, land degradation problems can emerge and fencing, along with other planning have to be considered as part of the whole situation. Fence planning has to be based on something more than squares and rectangles enclosing given areas.

Cattle tend to move along well defined trails causing the soil to become loose and powdery and leaving it in a condition in which it can be easily removed by wind or water action. Cattle pads soon become a shallow rill or drain which serves to divert runoff and carry it quickly to drainage lines when it would otherwise flow slowly over the surface.

The extent to which cattle tracks become an erosion problem depends on the intensity of use, which in turn is a reflection of stock numbers.

Vehicle tracks, stock pads and fire breaks are usually associated with fence lines and because water concentrates in these areas, extensive erosion can result if the placement of fence lines is not planned.

Looking at the detailed property plan (mentioned in the preceding section), it will be seen that natural subdivisions already exist. Fence lines should follow the internal natural features such as watercourses, ridges, rocky outcrops and timbered areas.

Water courses often occur at the junction of different soil types. Consequently, fencing placed adjacent to a water course will separate soils requiring different management and will not interfere with water disposal from cultivation, access tracks, firebreaks and stock pads.

Sometimes, compromises have to be made to achieve the major objective and a fence has to run down slope. If that is the case, it is preferable that the fence run at right angles to

the contours, to shorten the distance where erosion may occur.

In cultivation areas fences can be built;

- Along a split in contour bank direction
- Along the inlet ends of contour banks
- Alongside waterways, never in them
- 20 – 30 m above top diversion bank to allow for maintenance.

Fencing along natural boundaries will usually involve more planning than fencing in a geometric pattern, but the advantages of easier access and more efficient use of land will more than compensate for this.

Order of Development

During the first stages of development, boundaries are fixed and the availability of water is the major constraint determining both the location of fences and paddock size. Over time, with improvements in water supplies, further subdivisions take place to isolate soil types and pasture species so that with increasing segregation and stock control, the pasture resource use is maximised.

The first priority should be given to fencing off the most productive areas (e.g. cultivation, improved pasture areas etc.) so that maximum use can be made of these areas. In grass paddocks, this means that stock numbers can be controlled and reduced when the feed has been reasonably utilised.

The second priority should be to fence off those areas containing a large proportion of highly erodible country. These areas should be managed by moderate grazing while feed is available, and complete removal of stock in times of drought.

Further priorities may be to separate:

- Land types
- Timbered country where browse feed is available in times of drought
- High quality native pasture areas
- Creek frontages

Further subdivision depends on stock and land management requirements and obviously varies from property to property.

Laneways

Laneways are an increasingly common component of new fencing layouts these days. Once built and located correctly they are real labour savers with respect to stock management. Avoid narrow laneways that will be subject to heavy grazing and will become eroded and unproductive. Wide laneways (50 – 100 m) if managed correctly can provide useful feed when used as temporary holding paddocks and are less subject to erosion. The cost of fencing the laneways is also less because less pressure is exerted on the fences than if the laneways were narrow.

Gateways

Gates and their siting are another important aspect of fencing which does not receive enough attention. Gateways are expensive because they involve strainers and stays. It is important to have them in the right places, not only for ease of stock movement, but also to prevent erosion, water accumulation and wet patches.

Generally, the siting of gateways in the corner of a paddock is an advantage for ease of stock movement. However, the gate should not be hard into the corner. Move it up from the corner approx. 100 – 200 m or more so that

stock do not jam in the corner as they go through the gate. If stock are jammed into a corner the extra pressure on fences in that corner means that expensive strengthening with rails etc. is required.

Common sense should dictate that gates are not built in drainage lines or on erosion prone soils. Gateways on higher ground ensure good drainage and no stock pads channelling water through the gateway. A single gate in a long line of fence means that stock pads go straight from this gateway to the water point or the next gate, creating a real erosion hazard. Gates can be situated in several locations in a long line of fence and used alternatively to disperse stock movements.

The best place to locate a gateway to avoid erosion and pasture damage due to frequent concentration of stock, is in areas on level or near level ground on erosion resistant soils such as gravels well drained loams or rocky areas.

Stockyards

Stockyards and small holding paddocks are points of heavy stock concentration. If they are not to become a focal point for erosion and pasture degeneration, care must be exercised in selecting sites. As with watering points, the best sites are stable soils on relatively flat ground.

Stockyards must be in relatively open surroundings to facilitate handling of stock in and around the yards. Open areas on firm loamy soils with some timber for shade offer the best sites.

Ideally, yards are centrally located with the holding paddocks having direct access to as many paddocks as possible. Where this is not possible a laneway system greatly increases handling efficiency.

Preferably, build yards on slopes up to 1%. A slight slope will provides drainage from the working area and the yard site. Gullies, hollows and obstructions, such as rocky areas, that impede stock movement and prevent expansion should be avoided.

The site should be open but not devoid of trees. Shade is desirable in holding paddocks and cooling yards.

The yard aspect should be such that prevailing winds do not blow dust from the close working yards to the race area or towards nearby living quarters. Suitably located tree lines can reduce wind and dust problems.

A site with loam soil is preferable to heavy clay soils as the loam soils are less boggy and less dusty. Soil movement and boggy conditions are problems with heavy clay soils.

Construction

Fencing on the contour can be difficult with conventional and suspension fencing. These fences needed to be strained tightly, and strainer assemblies are needed on every end. An attempt should be made to approximate the contour with a number of straight sections.

When fencing along contour banks, permanent fences should be placed about 5 metres below banks. This allows room for construction and maintenance of fences and permits topping up of contour banks. Fences along the top of contour banks are difficult to strain and make bank maintenance difficult.

A good alternative is electric fencing. Electric fences are not generally strained as tightly and hence need less strainer assemblies. They are therefore much easier to position along the contour. Electric fences can also be located on top of contour banks as they are easily removed to allow bank maintenance.

Maintenance

As with all capital improvements, the key to their longevity is maintenance; not just of the fence, gateways, yards etc. but the tracks and stock pads that generally run beside the fences.

In areas where it is inevitable that water concentration will occur down stock pads or tracks close to a fence some preventative maintenance should take place eg

- Whoa boys, to divert water
- Fallen logs, bark strips or large rocks placed across the stock pads to divert water and stock away from the fence temporarily.

Compiled by, John Day 2014 from DNRM historic soil conservation data.



