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The Value of Improved Pastures

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INTRODUCTION

Planting an improved pasture is an important step in property development in the Top End of the Northern Territory. Improved pasture may consist of an introduced grass, an introduced legume or a mixture of both, sown on cleared land in a well-prepared seedbed. Its success hinges on the availability of adequate soil moisture, soil fertility, care at planting, a proper sowing rate and good quality seed. It can be difficult and costly to establish and maintain an improved pasture.

Why then, do we plant improved pastures? What benefit do they provide?

THE NEED FOR IMPROVED PASTURE

The need to replace native pastures with improved species stems from the pressure to increase animal productivity when the margin between returns and operating costs is narrowing on properties.

Attempts to increase herd productivity will increase grazing pressure on native species through:

- the use of urea and mineral supplements which stimulate appetite and increase feed intake;
- the use of adapted tropical cattle breeds, with greater foraging ability;
- the adoption of intensified herd management practices.

Native pasture species are not capable of withstanding increased grazing pressure because of their:

- low dry matter production;
- short growing period;
- low nutritive quality, particularly during the dry season;
- low to medium palatability;
- inability to stand frequent or intense defoliation.

Improved pastures on the other hand can provide:

- pasture stability under higher stocking rates;
- a full sward of palatable species;
- greater dry matter production to accommodate stock on small areas;
- better nutritive quality, especially during the dry season;
- species adapted to intense and frequent defoliation.

Furthermore, with a range of introduced species to select from, pastures can be established for special purposes such as:

- standover feed for special classes of stock;
- conservation as hay or silage;
- reclamation of degraded areas;
- protection of holding paddocks and laneways that are subjected to heavy grazing;
- ley legumes in rotation to fix nitrogen;
- seed production;
- grass ley in rotation to control broadleaf weeds.

DIRECT BENEFITS FROM IMPROVED PASTURES

The direct benefits from improved pastures are:

- increased carrying capacity on established improved pasture of 14 to 40 times compared with that on native pasture, that is 14 to 40 or more animals/ha on improved pasture compared with one animal/ha on native pasture;
- growth rates of 90 to 160 kg/year (0.25 - 0.44 kg/day) compared with 40 to 80 (0.1 - 0.24 kg/day) on native pasture;
- breeder pregnancy rates of 85% compared with 55%;
- branding rates of 80% compared with 40 to 50%;
- death rates in each class of stock of only 2% compared with 5% to 15% or higher;
- weaner weights up to 180 kg at five to six months compared with 120 kg on native pasture.

INDIRECT BENEFITS FROM IMPROVED PASTURE

Indirect benefits which arise from improved pasture development include:

- quieter stock leading to better marketability because of less bruising and higher quality meat;
- better control of stock, making mustering easier and quicker with less damage to equipment such as fences, yards and vehicles, thereby reducing operating costs;
- easier adoption of herd husbandry practices;
- greater value of cull stock because they are better fed and heavier;
- more animals reaching market because of fewer deaths;
- a higher turnover of stock as steers can be marketed 1½ - 2 years earlier and heifers mated a year earlier, allowing faster up-grading of herd quality;
- a more even cash flow over the year because of the greater marketing options;
- a substantial increase in the value of the property;
- an opportunity to fence, water and maintain smaller areas to carry the same number of stock.

DISADVANTAGES OF IMPROVED PASTURES

- Initial development costs are high at $200 to $500/ha, depending on the amount of clearing and land preparation needed.
- Large amounts of capital can be tied up in such items as machinery and plant unless contractors are used.
- The improved area will be out of production for at least the first wet season and most of the first dry season to allow pasture to establish.
- Land clearing, classed as a capital improvement, is not tax deductible.
- There may be a need for extra fencing and watering to subdivide the improved pasture into manageable areas.
- Annual or regular maintenance costs will be incurred for fertilisers and weed control.
- Soil erosion is a risk during the establishment phase.
- Ecological disruption, which may have long term detrimental effects, must be minimised.
- Woody shrubs and regrowth may have to be controlled.
- There may be selective grazing by stock on areas sown with some species, with resultant pasture damage.
- Variations in soil type will affect the establishment and persistence of sown pastures; grazing management will have to be adapted to cope with these variations.
- Improved pasture needs improved management. More intense planning, budgeting and organising are needed to successfully adopt and utilise an improved pasture grazing system.
- There have been no reports of increased disease incidence or mortality of stock on improved pasture except on *Kazungula setaria* which contains oxalates and has caused illness in horses, particularly when heavily-dressed with nitrogen.

THE DECISION

The decision to embark on pasture improvement therefore needs to be carefully considered in terms of:

- the long term aims of the property;
- the ecological and erosion problems that may occur;
- the net economic benefits in the longer term;
- the costs of establishment and maintenance, to ensure that they are within the scope of the property resources.

It is important to have a detailed property plan well in advance of planting so that the development program can proceed within the limits of your cash flow.

THE PROCESS

- Do not attempt to sow improved pasture in an area that is too large for the available resources during the wet season.
- Make sure that the sown area has every chance to establish; do not try to cut corners to save costs.
- Do small areas and do them properly.

WARNING

Pasture plants have the potential to become weeds in certain situations. To prevent that, ensure that pasture seeds and/or vegetative materials are not inadvertently transferred to adjacent properties or road sides.

For further information please contact your nearest Weeds Branch of the Northern Territory Government, call (08) 8999 5511.

Please visit us at our website:

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