Developing a rubber vine management plan

Control of rubber vine programs need to be planned. It is useful to know what help you can expect from government, how to tackle the problems—and if there is ever a time which you can relax your vigilance. The purpose of this information is to help you develop an effective plan to manage rubber vine.

Why? My property, my problem, my plan

Rubber vine control is an expensive operation that draws upon the capital and labour resources of a property. It is therefore important to adopt a business planning approach to managing rubber vine. The aim is long-term viability of the property.

Rubber vine's impact

Rubber vine infestations impact directly on a property's primary resources. The heaviest infestations of rubber vine usually occur on the best grazing country. It follows that productive capacity of the property is directly proportional to the severity of impacts caused by rubber vine.

Tall towers of rubber vine along the Burdekin River, north Queensland.

The impacts of rubber vine include:

- native and improved pasture decline through shading and competition;
- difficulties with herd management, including mustering and disease control;
- increased soil erosion due to a decrease in ground cover;
- a change in biodiversity ie. other (unwanted) flora and fauna on your property.

If the impacts are severe, then productive capacity of the property will be adversely affected. The capital value of the land will also be eroded. A high value is subsequently placed on the need to do something about the problem.

A realistic view of how rubber vine impacts on the overall property management system is necessary if planning is to be effective. Developing and implementing an achievable plan will reduce the impact of rubber vine on a property's primary resources.

Economics

Economic constraints are the primary reason for rubber vine management being given a low priority. This is because the bottom line on a grazing property is dollars in versus dollars out. This issue is especially relevant in today's circumstances, with rising production costs and relatively low returns. It is commonly recognised that controlling rubber vine may not provide a return in the short term. Early intervention is one of the most powerful and economical methods of weed control available. Expenditure is justified for several reasons:

- long-term productive capacity of the area is returned to an acceptable level;
- other parts of the property are protected from invasion by rubber vine; and
- the severity of impact of rubber vine is reduced.

The implications of not controlling rubber vine are serious. The economic considerations are more complex than a simple cost/benefit analysis. Not controlling rubber vine can affect everything you aim to achieve on the property. It is appropriate to justify expenditure in the same light as an insurance policy.

The Five Step Approach to Planning

(compiled by Nathan March, DNR, Cloncurry)

The structure of a rubber vine management plan is essentially the same for all scales of land utilisation from paddock to the State level. The most common planning approach taken consists of five steps, described below.

Step 1: Define the Problem

- Draw a property map including property and paddock boundaries, watering points, roads/tracks and creeks/rivers (indicate areas of rubber vine, noting the size and density of each infestation).
- Identify and indicate land classes (different types of country). This information may be useful as the susceptibility to invasion will vary between land types.

An appropriate base map from which to commence a plan may be an aerial photographic mosaic, satellite image or even a hand sketch. Remember, the greater the accuracy of your map, the greater it's usefulness in estimating areas and costs of control. The use of separate overlays (plastic transparency) for each of the components of your plan is often useful.

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Step 2: Determine Priorities

- Determine priorities for control on both a paddock and property basis.

When determining priorities it is important to consider:

- where is rubber vine adversely affecting management of the property eg. around water points, yards and mustering corridors.
- where are the high seed source areas.
- control efficiency (the treatment of the maximum area for the minimum cost).
- risk assessment (which areas are at risk of imminent invasion).
- which areas/paddocks/land classes are the most productive to the existing land managers.
- what legal or neighbouring responsibilities do you have.

Step 3: Determine Control Methods

- Identify resources currently available or affordable e.g. labour, machinery, spray equipment, etc.
- Determine the control methods required to address all three phases of the control program: initial treatment, follow-up and on-going monitoring.

There is now a comprehensive range of control methods available for rubber vine control. These include various herbicide application techniques, mechanical control, management options (ie. fencing and stock management), fire and biological control.

Usually a combination of methods is necessary to complete the job effectively.

Step 4: Develop a Financial Plan

- Estimate costs of control for each of the priorities identified.
- Assess the costs of control against other operations on the property.
- Identify the availability of financial incentives including tax concessions, low interest loans or labour programs.
- Integrate control costs into the short and long term property budgets.

It will probably be necessary to have considered control costs in conjunction with the evaluation of priorities and methods. For those who are unfamiliar with estimating costs it is recommended that you either contact the Department of Natural Resources Land Protection Officer for assistance, or undertake small-scale trials before committing a large amount of funds.

Step 5: Calendar your Activities

To determine when to undertake each control method it is important to consider the effectiveness of control at different times of the year and the seasonal conditions present.

If rubber vine has the potential to become a significant problem on your property, then it's control should be an annual undertaking similar to other property responsibilities.

Helpful Tips

Rubber vine control has no 'quick-fix' solution. Therefore, the development of a rubber vine management plan and a rational commitment to that plan is essential for the long-term effectiveness of your efforts. While your plan needs to be structured, it must also be flexible enough to handle changes in rural production brought about by external, uncontrollable influences such as drought and commodity price fluctuations.

The Five-Step Approach to Planning is reproduced with permission of the Queensland Department of Natural Resources. If you require assistance with any aspect of developing a management plan, contact the Department on Tel: (07) 3896 3111 or Web: http://www.dnr.qld.gov.au/

To find out more about the QDNR's Managing rubber vine manual contact: John McKenzie or Shane Campbell (QDNR) on Tel: (07) 4787 0600.

For more information about land-management issues in northern Australia, go to the Savanna Explorer section of our website at http://savanna.ntu.edu.au/

For information about the Centre's extensive research program go to our research section.