



Control using fire

'It's a great thing, fire'—John Teakle of Holmleigh.

Fire is perhaps the most overlooked tool in the control of rubber vine. Burning can be more effective and cost efficient than attacking dense infestations solely with chemical, which requires spending significant amounts of money and time.

Tom and Belinda Keats of Gleeson explain, 'There's a cost too—in machinery, men, breaks, loss of grazing—but it's still cheaper than herbicide. You invest a small amount of country to protect the rest of the country. Also, locking up and burning will increase the productivity of your best and currently invaded and unusable area, and that means increased stock production'.



▲ Fire requires careful planning.

Fire does not stand alone as an approach to controlling rubber vine but should be part of a planned and managed program that includes a number of control techniques and several fires. On some properties, burning may already be a routine part of the property management plan for maintaining balance on grasslands, savannahs and woodlands that have evolved under regular fire conditions.

Preparing and managing the fuel load prior to burning, and following up in a timely manner after the fires are critical in the overall success of the program. In his rubber vine case study, Bob Shoyer says that 'if a fire gets into it, it will kill it, but fire won't get in unless the rust and the grub (the larvae of the rubber vine moth *Euclasta whalleyi*) first weaken the plants and let more grass fuel and leaf litter build up under them'.

◀ Fire is a useful tool when controlling rubber vine.





Important factors to consider when planning treatment with fire:

- What is the desired outcome?
- When is the best time to burn?
- What is the seasonal weather outlook? (Check the Southern Oscillation Index.)
- What fuel load is required? (Remember, the greater the fuel load, the higher the potential for a high intensity fire.)
- Will fencing be needed to manage pre and post-fire grazing?
- Is non-target vegetation likely to be killed? (Large trees exposed to high intensity fires are likely to die. If so, make sure you comply with any state or local government legislation for vegetation management.)
- What safety precautions are required (e.g. firebreaks)? Remember that there are risks associated with fire not just on the day of the burn, but also on subsequent days.
- When will follow-up operations be required?
- Always get a permit to burn from your fire warden, and notify your neighbours.

A low intensity fire is adequate for controlling rubber vine and is cheaper, safer, and requires a lighter fuel load than a high intensity fire. It is also less likely to kill trees and other desirable vegetation.



When considering using fire it is important to take into account the amount of fuel present. If the infestation is dense, with little or no grass fuel, burn when there is as little soil moisture as possible, and a steady breeze. This will help the fire carry throughout the infestation and open up the canopy, allowing grasses to re-establish after the fire.

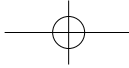
To fast track the re-establishment of grasses, it will probably be necessary to seed areas where high intensity fires have burnt rubber vine 'towers'. To avoid such high intensity fires, burn rubber vine towers only during moist conditions, prior to a general burn of the infestation.

Less dense rubber vine will not carry a fire from plant to plant but will allow grasses to grow under the canopy. When dry in late spring, these grasses can fuel a fire. In dry conditions with a moderate wind, even fairly thin pasture can generate a fire of sufficient intensity to kill most rubber vine plants. Such a mild fire will have the advantage of leaving a fair amount of viable pasture seed to take advantage of the next rain.

In areas with good grass throughout, burning should take place three days to a week after the first significant rain event of the season (>25 mm). This reduces the risk of losing pasture coverage and reduces the impact of fire on rapidly growing grass; any later after the rain and the grass will be too green to burn.

◀ Low fuel level—burn with wind (front burn).





▲ Too little fuel.

The weather conditions can also be used to control the intensity of a fire. For example, if there is a high level of fuel, burning late in the day will result in a less intense fire than burning in the middle of the day.



▲ Fuel is too green for a good burn.

If rust has not effectively defoliated the rubber vine, it may help to integrate the use of chemical with fire as a treatment. Applying chemical to rubber vine will open up the canopy and aid grass growth within an infestation, improving the fuel load for the follow-up fire. Note that sufficient time must be allowed for the fuel to build up between the chemical application and the fire.

Clearing tracks through the rubber vine with a bulldozer can also increase the fuel load within infestations. Seeding cleared tracks will encourage growth of grass but isn't always necessary. Once there is sufficient fuel, burning can take place.



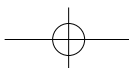
▲ More fuel than necessary.

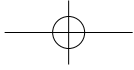
It is usual for rubber vine to regrow significantly after the first fire. All this regrowth is usually killed during the second fire a year later. Other control methods can be used as follow-up after the initial burn.

Areas should always be spelled after a fire to allow the grass to recover. An area larger than the infestation should be burnt to prevent cattle from congregating just on the new pick in the affected area when they regain access. If they are allowed to do so, they will reduce both the fuel load for the following fire and the competition between the grass and rubber vine seedlings. Another option to help reduce post-fire grazing pressure from wildlife and stock is to burn another area to provide green pick well away from the rubber vine.



▲ This is a good level of fuel. The fire will carry.





Infestations should ideally be burnt for two successive years then spelled from fire for three or four years. Frequent fires can alter pasture composition, increase soil erosion, lead to loss of nutrients and favour fire-tolerant species that could be other weeds.



▲ Clear tracks in dense rubber vine to improve access and increase fuel load.



July 1999



Fire November 1999



March 2000



July 2000



Fire October 2000



March 2001

▲ Two successive early wet season fires—allows for quick response of grass.

