

Suppression of Innocent weed

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PRIDHAM
VITICULTURE
Vineyard and Land Management

A broad approach to the long term control of the dreaded innocent weed

Pridham Viticulture have recently undertaken a 3 to 4 year project to bring under control a Blewitt Springs vineyards increasing innocent weed problem. The approach is to use cultural as well as chemical methods to create conditions that don't favor the development of problem weeds, but at the same time improve soil structure and organic carbon levels. Rather than use a system of calendar spraying and tillage we have developed our techniques through observation, research, site analysis and tracking local weather patterns. The photos in the gallery below are the steps taken so far as well as comments on the experiences.



9/9/08 This cover crop of Rye corn was planted early June after an inter-row herbicide and disc tillage. We allowed the under vine to grow naturally to cover the soil and develop a root system that would stabilize the sand. Jaguar herbicide was used to suppress Sour Sobs and other broad leaf plants so the cover crop could advance.



23/9/08 Under vine burn off with Spray seed was used after plants had reached sufficient mass to create a mulch layer.



30/9/08 Rye corn pre flowering at 5ft high 2 weeks before rolling.



14/10/08 The rolling process. We waited 2 weeks into flowering to maximize insect activity (the place was humming).



14/10/08 The resulting mulch layer and intact root system



Next step – to monitor under vine weed growth, wait for rain to germinate the Innocent weed then spray out at precisely the correct time in the growth cycle. When, and if, the rain comes we will monitor on a daily basis.

More to follow. Stay tuned to our website for details.
www.pridhamviticulture.com.au

Vineyard floor management program

2008	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Spray out												
ground prep												
seeding												
slashing												

Program Outline

Year 2	Same as above but mix in crimson clover with rye corn to increase organic bulking and to create fibours root system. Prepare for a permanent sward in year 3 or 4 depending on summer weed control progress.
Year 3	Depending on success of past 2 years program either another rye corn sowing or year 4 program
Year 4	Permanent sward mix- rye grass and coxfoot fescue with some sub clover. Summer weed sprays are required if weed populations increase.

Notes
Spray outs will be done after monitoring growth stages. Winter & Autumn sprays generally cover all winter growth weeds and October to February sprays are to keep summer weeds under control.
Discing and/or rotary hoeing to prepare seed bed.
Rye corn with fertiliser. This variety is used as a clean out crop to prepare for eventual permanent sward.
Slashing or rolling at the correct time so ground moisture is used up, seeds have set and plants have large bulk to create maximum mulch. (no discing in as this will destroy root structure)



Burrs of *Cenchrus longispinus*

Plant of *Cenchrus longispinus*

Cenchrus incertus and *Cenchrus longispinus* are both called innocent weed and were introduced from north and central America. The two species are very similar, the minor differences include greater number and length of spines on the fruit of *C. longispinus*, which is always annual while *C. incertus* can be perennial. In South Australia, almost all innocent weed infestations are *C. longispinus*, but *C. incertus* is more common in the eastern States.

Distribution

Eyre Peninsula - isolated infestations but high potential for spread

Northern Pastoral - common in Pt Augusta, isolated infestations in the southern rangelands, isolated patches in northern pastoral

Northern Agricultural / Yorke Peninsula - widespread

Murray Mallee - widespread

South East - scattered in north, scarce in south

Central Region - small isolated infestations

Impacts

The burrs of innocent weed contaminate wool, adding to costs of handling and processing and downgrading the product. Their needle-sharp spines also cause physical damage to livestock and people. The burrs can also contaminate crops and produce, especially dried fruit, reducing its value and marketability.

Recognition

Cenchrus longispinus is a summer-growing annual grass, and difficult to distinguish from other grasses until the burrs are formed. Leaves are flat, light green and 3-8 mm wide. The bases of the stems have a reddish colour and are bent, giving the plant a spreading shape.

The flowering head at the end of an erect stem up to 80 cm tall produces up to 40 burrs. Burrs are 4-7mm wide, finely hairy, green to straw-coloured or purplish and contain 1-4 smooth ovoid seeds. They bear 40 or more sharp spines 3-7 mm long with microscopic barbs. Roots are fibrous and shallow.

Cenchrus incertus is similar, but sometimes becomes perennial (re-shooting from the crown in spring) and has swollen, hollow leaf sheaths. The burrs are often hairless, and have fewer spines up to 5 mm long.

Ecology

Innocent weed grows well on disturbed sandy ground and under irrigation and will not establish well in managed pastures. Seeds germinate mainly in spring and early summer after rain but germination can also occur at other times of the year. Burrs are produced over summer and most plants die in autumn. Summer rainfall and irrigation will extend the growing season.

The hooked spines on the burrs are well adapted for dispersal on animals by clinging to wool and fur. The burrs are easily carried on clothing, packaging and vehicle tyres. Contaminated hay and produce is a common method of spread for innocent weed.

Further Information:

Parsons, W.T. & Cuthbertson, E.G. (2000). Noxious Weeds of Australia. 2nd ed. Inkata Press.

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For more advice on recognising and controlling innocent weed, contact your local Animal and Plant Control Board:

