

Harvesting Veldt Grass Seed and Seed Quality

BACKGROUND

Harvesting veldt grass seed can be a unique and time consuming process, and the following is a summary of some of the methods used and problems encountered by local landholders including drying and seed quality.

PRE-HARVEST:

- Spray topping for weed control.
- Judging the timing of harvest.
- Windrowing is becoming a more common practice.

HARVESTING METHODS:

- Metal trough mounted on ute or front-end loader.
- Conventional header using lucerne punch hole sieves.
- Stripped off with a 10-foot harvester with beaters. (not cut off)
- Cut with binder (no string) allowed to dry, then forked into header.
- Windrowed, loaded into silage trailer, heaped in the paddock to dry then forked into harvester.

POST-HARVEST:

- Drying seed after harvest.
- Seed quality and germination rates.
- Chilling the seed to improve germination.

GROWERS EXPERIENCES

Neville Pfeiffer, Parraki.e

We harvested veldt for the past 50 years with difficulty. Usually stripped off with a 10-foot harvester with beaters (not cut Off) seed is then dried on hessian curtains and turned 4 times daily for the next 2 days and then once per day for next 5 days. We have been the major seed producer in South Australia for the past 70 years. We have tried windrowing but then it is harder to get a clean sample.

Is there anything different you would like to try?

To build a 30–40-foot variable speed beating machine.



Veldt Grass near Keith prior to windrowing.

Henry Angas, Meningie.

Windrowed and harvested, difficult to get a high seed germination percentage. Have tried a metal trough mounted on the front of a 4 X 4. (See below)



Natalie Allen, Cavanagh Farms, Keith.

Tried direct heading for first time and it didn't work out, seed germination test was very poor. Not sure if the seed requires a chilling time or something else. There is currently a lack of information available on Veldt Grass seed treatment.

Adam Desmazures, Colebatch.

Have tried with a metal trough on front end loader but was unsuccessful.

John Croser, Meningie East.

The owners prior to me sowed Veldt and harvested it by cutting with a binder but not using hay tie so that it was left in heaps to mature or dry. They then forked into a Class Harvester for the seed to be threshed out.

James Darling, Landscape Beef, Keith.

Harvested 70ha in 2022. We windrowed the Veldt, let it dry for 5 days. Harvested with a conventional header using punch hole sieves. Had to spread seed out to help it dry. The timing of windrowing is tricky.

Is there anything different you would like to try?_Would like to try different timing of cutting._Would like to try spray topping the paddock in mid-August to reduce weeds and try a light rate of Glyphosate to control weeds.

Tim Cartledge, Menalbyn, Meningie East.

Captured seed in a trough in front of tractor. Low output but high germination rate. Previous owner tried windrowing and loading into silage trailer. Emptied into heaps, allowed up to 2 months to dry & forked into harvester. Any rain runs off like a thatched roof.

Tried windrowing (Large rows to prevent seed shatter) & used header pick up front into conventional harvester. Only a 3–7-day window for optimum harvesting & quality. All methods very time consuming.

Landscape Beef, Keith - Harvesting Veldt Grass Seed & Seed Quality

Landscape Beef has planted veldt grass on sand hills and the germination after 30 days was significant. However, the seeding rates were very high, and I will endeavour to count out 100 seeds and plant them again. We are wanting to get the timing right for harvesting of the grass and therefore we would like to know more information on the following questions:

Tony Evans, Landscape Beef, Keith. Questions'	Reply from Marc Wilmshurst Supervising Seed Analyst Seed Services Australia, SARDI.
The second test, KN03 was used to help with germination – can we have some further clarification as to what this product is.	KN03 is a potassium nitrate solution (0.2%) that is used to help break dormancy for some species. It is not listed in the International Seed Testing Association (ISTA) rules as a method for breaking dormancy in veldt grass though, which is why we don't use it by default.
Is there a reason the count stops at 21 days?	We stop at 21 days that is the time frame listed in the ISTA rules for veldt grass. We can extend the test if requested.
From speaking to Naracoorte Seeds, they asked if a TZ (tetrazolium) test had been completed. Can you please advise what this test does?	A TZ, or tetrazolium, test is a test that indicates viable and non-viable seeds. There isn't a method in the ISTA rules for TZ tests on veldt grass and we haven't done a TZ test on veldt grass before so it would be trial and error if we were to try. The caryopsis (kernel) is thinner than the width of our scalpel blade so it would be extremely difficult, and we couldn't promise a valid result.
How do you determine 'dead seeds'?	Dead seeds are soft, often mouldy and if touched they squash easily, as opposed to fresh ungerminated seeds that are still firm to the touch and are not mouldy.
What information do you have regarding the dormancy period of the seed?	The dormancy period of seed varies from species to species. We can try multiple methods to break dormancy, such as pre-chill, KNO3 different temperature regimes (ISTA only recommend one temperature regime for veldt grass), extending tests with a second pre-chill mid-test etc but sometimes mother nature reigns supreme.
We have also discussed a process known as de-husking the kernels, how does this test help with germination?	Dehusking the seed would give us a comparison between seed that you would be sowing that may be sterile seed vs the caryopsis (kernel) that contains an embryo. The theory is the dehusked seed would have a higher germination result if there were lots of sterile seed that were not dehusked.
From my understanding, WA has a history of harvesting the grass. Do you recommend a company in WA who may use different techniques to what is used in SA?	We will contact the WA & Tasmanian ISTA labs and ask what their method and success rate is for germinating Veldt Grass, and we'll come back to you on that.



Veldt Grass windrowed to dry prior to harvesting, near Keith



Veldt Grass seed



Freshly harvested Veldt Grass seed before and after cleaning



Veldt Grass seed drying prior to bagging.

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