



GRAIN HARVESTING GUIDE

PRODUCED IN PARTNERSHIP BY THE NSW RURAL FIRE SERVICE, NSW FARMERS AND AUSTRALIAN CUSTOM HARVESTERS

Fires which start during harvesting operations can destroy homes, crops and livelihoods. However many are preventable.

It is your responsibility to limit the ignition and prevent the spread of fires from your property.

This voluntary guide applies to all grain harvesting operations that occur “in the paddock” including the operation of grain harvesters, vehicles involved in the transporting of grain, grain dryers and grain augers.

Your responsibilities

Under the Rural Fires Act 1997, any public authorities and owners and occupiers of land have a duty to prevent fires starting or spreading from a property.

Land owners and occupiers must not use any machinery where heated parts of the machine comes into contact with combustible material.

If you are using machinery, or you are welding, using explosives or an angle grinder, you should always carry fire safety equipment such as:

- A knapsack spray pump with at least 16 litres of water; or
- A fire extinguisher (liquid type) of at least nine litres capacity; or
- A dry powder extinguisher of at least 0.9kg capacity.

When to cease harvesting

It is recommended that you cease harvesting operations when the Grass Fire Danger Index (GFDI) is 35 or more.

To make it easier, we've prepared the grain harvesting guide on the next page. This guide is a calculator that equates to a GFDI of 35.

Grassland Fire Danger Index (GFDI) - Fire Behaviour Relationships

Grassland Fire Danger Index (GFDI)	Rate of Spread (kph)	Difficulty of suppression	Maximum Area At Various Times From Start (Hectares)			
			1/2 HR	1 HR	2 HR	4 HR
0-11	0.3-0.6	Low Moderate Head fire stopped by road and tracks	3-6	20-40	80-160	320-640
12-24	1.3	High Head attack generally successful with water	15	90	360	1440
25-49	2.6	Very High Head attack will generally succeed	35	210	840	3360
50-99	5.2	Severe Head attack may fail except in favourable circumstances	80	480	2000	8000
100-149	6.4-12.8	Extreme Direct attack will generally fail.	105-300	630-1800	2500-7000	10000-28000
150+	12.8+	Catastrophic	300+	1800+	7000+	28000+

Using the grain harvesting guide - an example

Step 1

You will need to measure the current temperature, humidity and wind speed on your property.

For wind speeds, you should average this reading out over 10 minutes. For humidity, round the number down.

Step 2

Then, using the measurements you've just taken, find the maximum recommended wind speed in the table.

For example, a temperature of 40°C and 15% relative humidity equals 26 kph.

Step 3

Compare this result with the wind speed you recorded.

If the wind speed you've recorded is equal to or greater than the number in the table, it is recommended you do not harvest. Reassess weather conditions later.

In this example, if the wind speed on your property is 26 kph or more, you should not harvest.

		Current Relative Humidity										
		5%	10%	15%	20%	25%	30%	40%	50%	60%	65%	
Current Temperature	15°C	31	35	38	40	43	45	49	53	56	58	Average wind speed (kph) that equates to 35 GFDI
	20°C	29	33	36	38	40	43	46	50	53	55	
	25°C	27	30	33	36	38	40	44	47	50	52	
	30°C	25	28	31	33	35	37	41	44	47	49	
	35°C	23	26	28	31	33	35	38	41	44	46	
	40°C	21	24	26	28	30	32	35	39	41	43	
	45°C	19	22	24	26	28	30	33	36	39	40	
<p>Is the wind speed you recorded equal to or greater than the wind speed shown above? If yes, it is recommended you do not harvest. Check weather conditions later.</p>												

We acknowledge the South Australian Country Fire Service and South Australian Farmers Federation for their work in developing this guide.