



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.

Landowners and occupiers must not use any machinery where heated parts of the machine come 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
- 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 Behaviour Index (GFBI) is **40** or more. The **Grain Harvesting and Fire Safety calculator** on the following page, shows the conditions at GFBI 40 with an example.

During harvesting season, Harvest Safety Alerts may be issued for areas at a fire danger rating of **High** and above.

The **Grassland Fire Behaviour Index** table below demonstrates the serious impact fire behaviour can have on your crops. For example, on a Catastrophic fire danger rating day, the potential for crop loss from grassland fire is estimated at 26,000+ hectares over 4 hours.

Grassland Fire Behaviour Index (GFBI)

Grassland Fire Behaviour Index (GFBI)	Rate of Spread (kph)	Difficulty of suppression by fire danger rating	Maximum Area with potential to burn at various times from start (Hectares)			
			1/2 HR	1 HR	2 HR	4 HR
12-23	1.3	Moderate	20	65	260	1,000
24-49	2.6	High	50	200	850	3,400
50-99	8	Extreme	200	800	3,300	13,000
100+	12+	Catastrophic	400+	1,600+	6,500+	26,000+

Using the Grain Harvesting and Fire Safety Guide - an example

Step 1

Measure the current temperature, humidity and wind speed on your property. Average out the wind speed over 10 minutes and round down humidity readings.

Step 2

Using your temperature and humidity readings, find the maximum recommended wind speed in the table. For example, a temperature of 40° and 15% humidity equals 21 km per hour.

Step 3

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

Grain Harvesting and Fire Safety Guide

		Current Relative Humidity											
		FBI = 40	5%	10%	15%	20%	25%	30%	40%	50%	60%	65%	
Current Temperature	15°C	33	36	39	43	47	51	60	60	60	60		Average wind speed (kph) that equates to 40 Fire Behaviour Index (FBI)
	20°C	29	32	35	38	41	45	53	60	60	60		
	25°C	26	28	31	33	36	40	47	56	60	60		
	30°C	23	25	27	30	32	35	41	49	58	60		
	35°C	21	22	24	26	28	31	36	43	51	56		
	40°C	18	20	21	23	25	27	32	38	45	49		
	45°C	16	18	19	21	22	24	28	34	40	43		
	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.												

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