

Grassland Fire Danger Index (GFDI)

Fire Behaviour Relationships

FIRE DANGER INDEX	MAXIMUM RATE OF SPREAD (km/h)	DIFFICULTY OF SUPPRESSION
0-11	3.6	Low-Moderate Head fires may be stopped by roads or firebreaks and easily controlled with water.
12-24	5.8	High Fires can be controlled. Embers will blow ahead of fires. Spot fires may occur.
25-49	9.6	Very High Fires can be difficult to control. Flames may burn into the tops of trees. Spot fires can occur well ahead of the main fire.
50-74	12.4	Severe Fires will be uncontrollable. Flames will be above roof heights. Spot fires may occur up to 4kms ahead of the main fire.
75-99	14.3	Extreme Fires will be uncontrollable, unpredictable and fast moving. Significant embers will be blowing around. Spot fires up to 6kms ahead of the main fire.
100+	15+	Catastrophic Fires will be uncontrollable. Flames will be well above roof heights. Thousands of embers will be blowing around. Spot fires may occur up to 20kms ahead of the main fire.

A local, actual GFDI of 35 is the cut-off point for grain harvesting operations



Tools to help determine the GFDI applicable to grain harvesting

Grain Harvesting Operations – GFDI 35 Calculator
(Refer to separate Grain Harvesting Operations Table)

Bureau of Meteorology Website
www.bom.gov.au

Weather Meters
(That measure temperature, wind speed and relative humidity)

Portable Weather Stations

For further information
Website: www.cfs.sa.gov.au
Bushfire Hotline: 1300 362 361



Grain Harvesting Code of Practice

A basis for district harvesting codes of practice

This Grain Harvesting Code of Practice applies to harvesting of *any* flammable crop, all grain harvesting and grain handling operations that occur “in the paddock”, including operation of grain harvesters, operation of vehicles involved in transporting grain, grain dryers and grain augers.



www.cfs.sa.gov.au

Legislative Requirements

1. Compliance with *Regulation 37* under the *Fire and Emergency Services Act 2005* regarding the use of stationary engines to auger a crop. That is, an operator must clear the space immediately around and above the engine to a distance of at least four (4) metres, *or* a person who is able to control the engine is present at all times while the engine is in use. The operator must also carry a shovel or rake, *and* a portable water spray in good working order, *and* ensure that engine or exhaust system complies with *Fire and Emergency Services Regulation 32(2) and (3)*.
2. Compliance with *Regulation 38* under the *Fire and Emergency Services Act 2005* regarding the use of internal combustion engines to harvest or move a flammable crop. That is, an operator must carry a shovel or rake, *and* a portable water spray; *and* ensure that engine or exhaust system complies with *Fire and Emergency Services Regulation 32(2) and (3)*.

Fire and Emergency Services Regulation 32

- (2) For the purposes of this Division, an engine or vehicle exhaust system complies with this Division if:
 - (a) all engine exhaust emitted by the engine or vehicle exits through the system; and
 - (b) the system, or a device or devices forming part of the system, is designed to prevent the escape of burning material from the system; and
 - (c) the system, or a device or devices forming part of the system, is designed to prevent heated parts of the system from coming into contact with flammable material; and
 - (d) the system is in good working order.
- (3) For the purposes of subregulation (2)(a), engine exhaust emitted by a turbocharged engine, or a vehicle fitted with a turbocharged engine, by means of a device of a kind commonly known as a waste gate will be taken to exit through the exhaust system of the engine or vehicle.

Required Practices

1. Suspend grain harvesting operations when the **local actual GFDI exceeds 35**.

The local actual GFDI can be determined:

 - By a local committee, in consultation with local farmers
 - As measured or calculated by the harvesting operator.
2. Ensure crop residues on machines are kept to an absolute minimum, especially in areas of potentially high fire risk, such as engines, exhausts or brakes.
3. Adopt a regular maintenance program, both before and during grain harvest operations, paying particular attention to wearing parts and bearings.
4. Operators being aware of the construction materials on harvesting machines and taking reasonable steps to reduce any potential build up of static electricity through harvesting operations.
5. Have immediate access to a UHF CB radio or mobile phone.



Recommended Practices

1. As conditions deteriorate, increased maintenance intervals and vigilance should be practiced.
2. As conditions deteriorate, actively seek information on voluntary harvesting bans that may be active in the area.
3. Prior to harvesting commencing, establish a minimum 4 metre fuel break around the perimeters of crops or paddocks to be harvested. This may consist of a 4 metre mown or chemical break with a 2 metre ploughed strip incorporated within it. Alternatively, review your property layout and establish a series of strategic fire breaks around groupings of paddocks.
4. Maintain equipment maintenance records.
5. Have a well-maintained and fully operational farm fire-fighting unit with a minimum of 250 litres of water located in the paddock area where harvesting or grain handling operations are occurring. Refer to the Joint Guidelines for operating Farm Fire Units (found at www.cfs.sa.gov.au).
6. Operators should monitor media fire ban information advice, or consult the Bureau of Meteorology through their various information methods.
7. All operators of harvesting equipment should be bushfire ready by having appropriate fire fighting clothing and a plan for the protection of themselves, their equipment and the community.
8. Inexperienced operators should undergo instruction and training.
9. Establish a fire prevention and emergency response strategy in regards to fire safety for staff, contractors and machinery operators.