THE YEAR THAT WAS

"Adversity makes a man wise, not rich"

Ian McClelland
Chairman
Birchip Cropping Demonstration Sites

1994. What a year! Let's hope that it's not repeated in 1995.

For most farmers in the region, 1994 was the third lowest rainfall year since 1945, or the fifth lowest rainfall ever.

Despite the low rainfall year, many farmers managed to salvage some crops. This was due mainly to the high spring and summer rainfall of 1993 which meant that fallows were full of moisture. (Soil moisture levels of up to 140 mm were recorded at sowing time).

Cereals yielded generally from 0.2 to 2.5 t/ha., depending on the initial soil moisture levels, and the odd fortuitous rain. Cereals sown into stubbles yielded from 0.2 to 1 t/ha and cereals on fallow paddocks yielded from 0.8 to 2.2 t/ha. Legume crops sown into stubbles generally failed to yield at all. Legumes sown into fallow paddocks yielded from 0 to 0.6 t/ha. Canola crops yielded from 0.2 to 1 t/ha where sown on fallow paddocks.

Rainfall totals for 1993 and 1994 were almost identical until the end of July. In fact, 1994 had good June sowing rains, whereas in 1993 we had to wait until July to sow crops. Unfortunately, that is where the correlation ends. 1993 realised approximately 250 mm for the rest of the year, while 1994 managed only about 50 mm.

The weather following sowing this year was mostly dry and frosty with generally clear days. Warracknabeal managed 38 frosts between June and September, compared with the average 18 (June 5, July 10, August 15, September 8).

As a result, the killing of weeds became a difficult task. With frosts and dry weather, weeds ceased to grow, and as a result, spraying days were hard to find.

Spring was dominated by dry weather and strong winds. The maximum and minimum temperatures for the spring months were close to normal, and most of the spring rain fell in October, which helped cereal crops produce excellent grain size and quality.

Most people associate droughts with strong winds, particularly those people who can remember the droughts of the 1940's. Several days in 1994 led to severe soil erosion. Most paddocks not in crop were dry, quite bare and flat. The combination of bare paddocks and strong winds produced the problem. Many farmers, as a result, cultivated paddocks dry in an effort to stop soil erosion.

As in many parts in the Wimmera during 1993, severe mice problems occurred in the Mallee region during 1994. This was caused by the large amounts of grain lost through wind damage during the 1993 harvest. Many farmers poisoned mice in emerging crops, especially in legume crops. Some farmers poisoned up to three times without killing all the mice.

Because of the drought across eastern Australia, feed grain became extremely scarce. By September, feed barley and wheat values rose to $200/tonne on farm. It was an added irony for those farmers who had sold grain at the previous harvest for $60-$80/tonne.

Fortunately, the values of all cereal grains remained high all the way through to the 1994 harvest. This at least made the low yielding crops worth harvesting. Most wheat harvested was of high quality. High protein values reached a peak of $235/tonne at harvest time.

The main harvesting problem was low, thin crops. Weather conditions and delivery of grain were the least of anybody's worries. Many farmers harvesting crops took to working office hours, so strong was their confidence in the continuing dry weather.

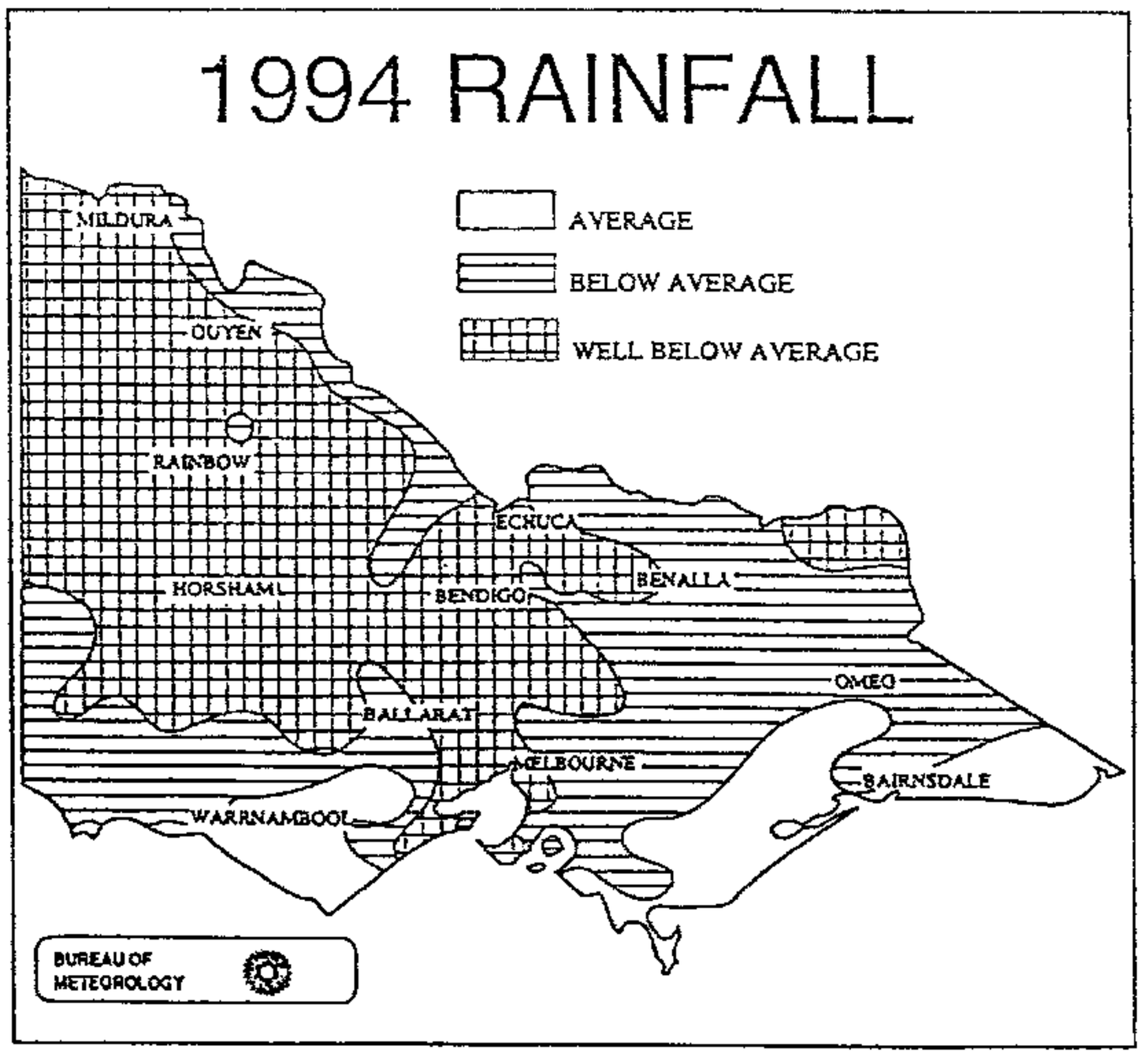
Livestock generally had a tough year. Many farmers sold most of their livestock, when July failed to produce any worthwhile feed. As grain prices rose, the cost of feeding livestock became prohibitive. Wool prices firmed, which helped keep livestock prices up. Stubbles and failed legume crops, even though they had high nutrient value, did not last for grazing. Many paddocks drifted during harvest, even those which had not been grazed. The 1995 autumn rainfall will be crucial in determining how many sheep will remain in the area and the extent of soil erosion problems.

Every year has its compensations. One was the excellent holiday weather experienced this year. Although this may be rubbing salt into the wounds of some people who did not have a holiday, it is typical of drought years. Because of the short harvest period, most people at least had time to relax and prepare for 1995.

Overall, farmers had a worrying, even depressing, year. Those farmers who achieved the extra 20-40 mm of rain during the spring managed an almost average year. 1994 could have been average with one or two more rains. Nevertheless, the consequences, had the rain failed to fall on the 8th of June, would have been disastrous. Most farmers will survive 1994 as long as the 1995 rainfall is average or above.

Of course, the big fear is that 1994 was just the warm-up.

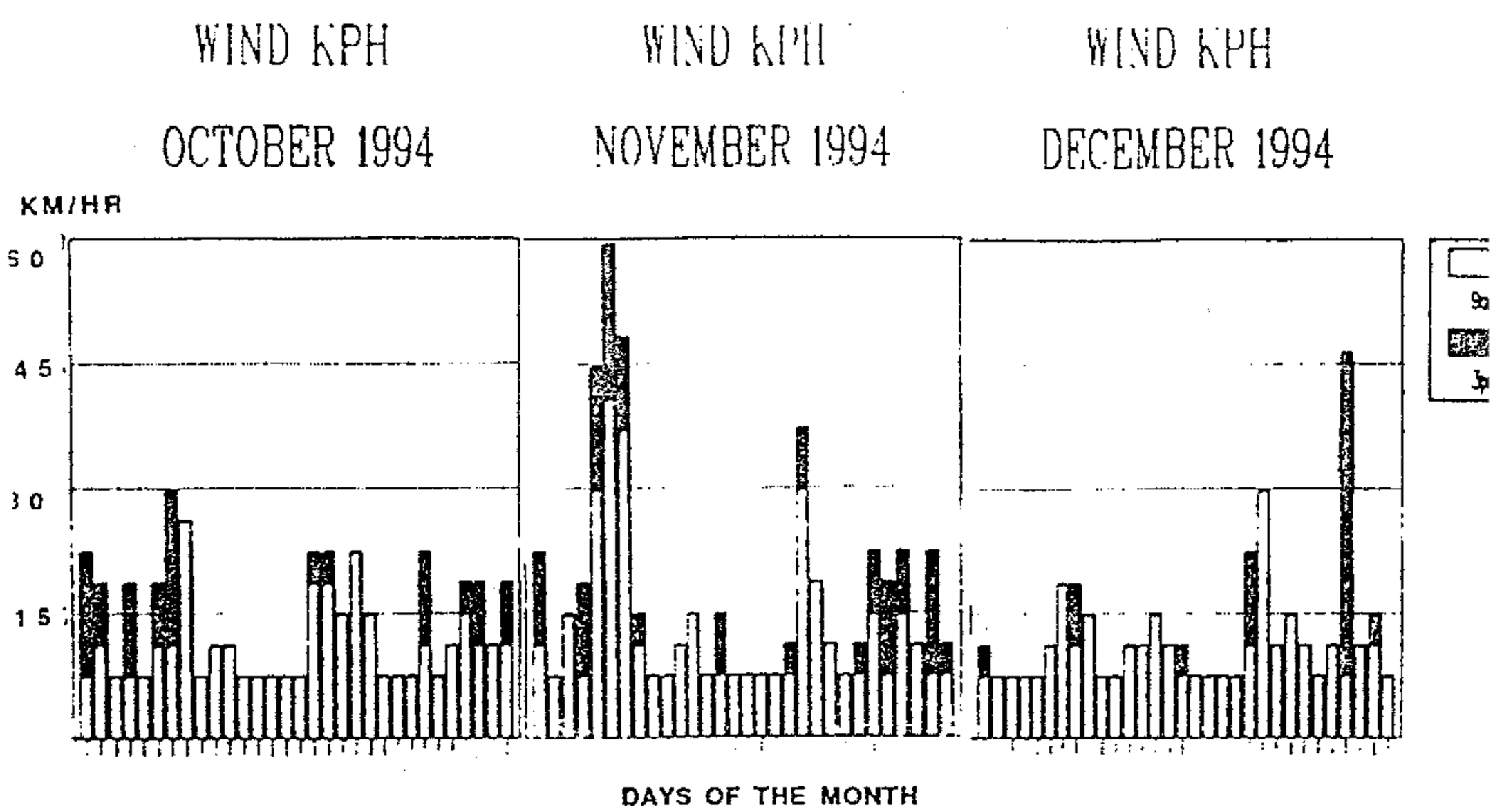
The redeeming feature of 1994 was the high grain prices. Let's hope they continue.

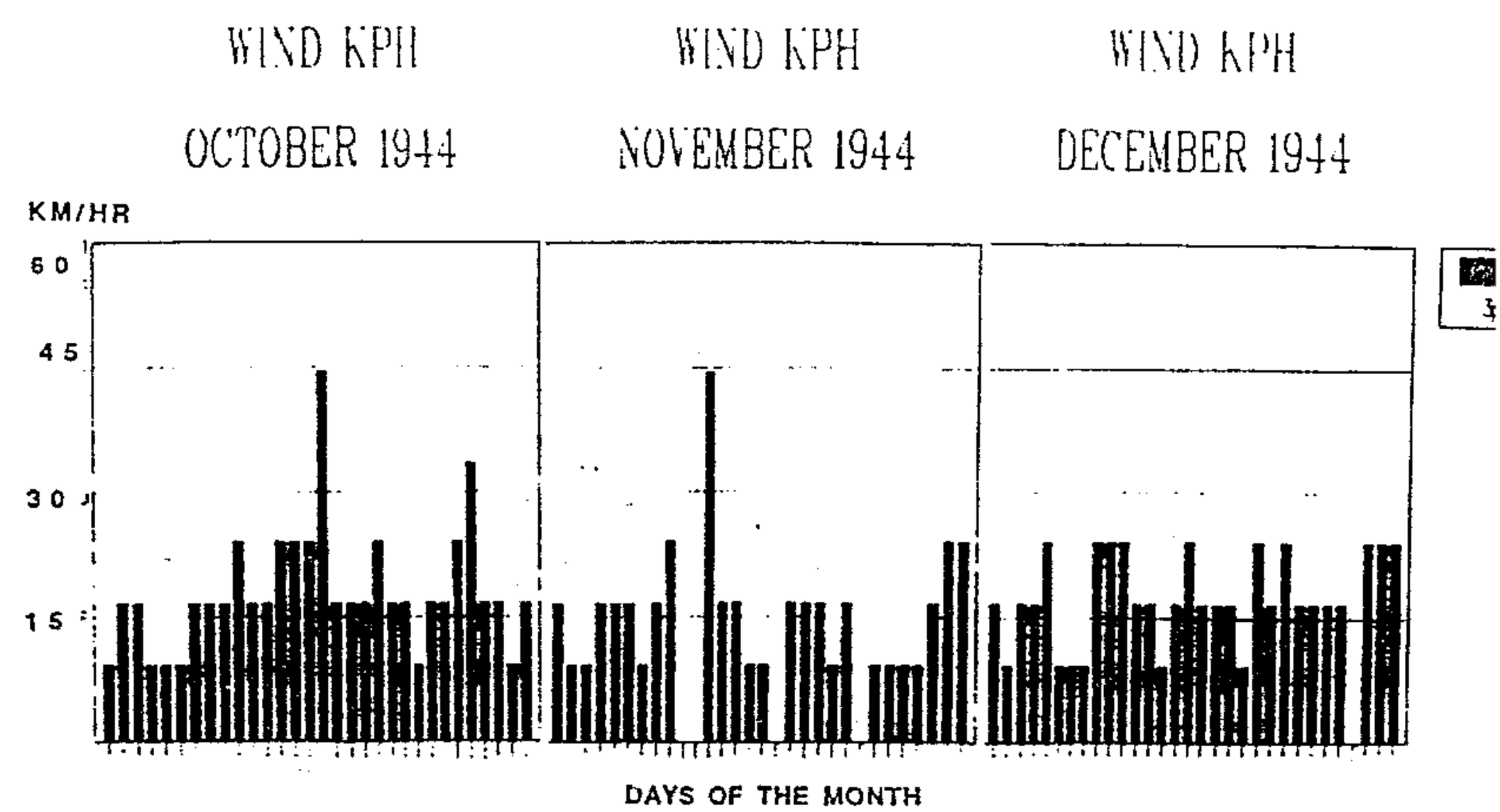


Wind

"No weather is ill, if the weather is still"

Drought years are often accompanied by strong winds which cause soil erosion. 1994 was no exception. Three occurrences of strong winds during November and December caused some severe wind erosion. The main damage was caused by the winds on the 5th, 6th and 7th of November, which blew consistently at speeds of up to 60 km/h. Even though in our history, stronger winds have been experienced (up to 100 km/h) these winds tend to blow for only short periods of time. The following graphs show the wind velocities at 9 pm and 3 pm at Warracknabeal during October, November, December 1994.





All farmers have heard of the dust storms of the 1943/44 droughts. The wind velocities at Warracknabeal are shown during October, November, December 1944. Comparisons between 1994 and 1944 may be made, even though the measurements in the 40's were more subjective than today's measurements. The winds were marginally stronger during 1944, particularly in December. However, the wind blasts of November 5, 6, 7 of 1994 stand out as one of our "major blows". The description of the month of December 1944 by the Beulah weather data collector, L. Howard, gives some idea of the month of December 1944.

"During the month the district has experienced day after day of dust storms, two of which were the worst experienced in the district. Farmers state the drift of soil is becoming alarming, as there is nothing they can do to stop it. They said a heavy rain would allow them to use cultivators. This may help to stay the drift. Feed has all been drifted over - dams and channels full of sand - position critical in parts."

Red rain was experienced in Melbourne on 19th November 1944 and 16th December 1944.

The famous dust storms of February 8th, 1983, will be remembered by all, particularly by the residents of Melbourne and Geelong, who suddenly became aware of Victoria's drought in technicolour vision. Wind speeds of up to 70 km/h for very short periods were experienced that day. The erosion wind probably lasted less than an hour. The dust was made visible by its being trapped in the wedge of cool air caused by the approaching cool change. The replacement cost of the nutrients carried by that dust storm was of the order of $4m. **Incidentally, the dust which fell on Melbourne that day principally came from an area between Hamilton and Melbourne, not NW Victoria.**

The three dust storms which ravaged South Australia during May of 1994 were caused by wind gusts of up to 60 km/h and lifted dust over large areas of the wheat belt and beyond. The total estimated lost dust amounted to 10-20 million tonnes, far exceeding the 1983 dust storm of 2 million tonnes of topsoil.

To understand the process of wind erosion, see John Leys' article in this manual which explains the process of wind erosion.