

Long range forecaster put to the test

By David Dowling

Late last year, I was chatting to a couple of very well respected cotton growers who were espousing the abilities of a particular long range weather forecaster. According to them, New Zealander Ken Ring produces remarkably accurate long range forecasts with rain events usually within a day or two of the forecast and of the same approximate magnitude.

On the one hand, I am a total skeptic as far as this goes. I think our weather systems are so complicated that around two weeks is the longest period over which anyone could forecast with any accuracy using current technology.

But, on the other hand, the growers I had spoken to were no fools. If they believed in the forecasts, and had used them successfully in their business, there may just be something in it.

There was only one way to find out

— get Ken Ring to make a forecast for somewhere in the middle of the cotton belt and to check its accuracy regularly through the year. When I rank Ken, I held little hope that he would agree to a public forecast. But, without hesitation, he jumped at the chance.

On these pages, you will see Ken's forecasts for rainfall and temperature for Moree for the February–March period. His forecasts for the rest of the year have already been provided and will appear in subsequent issues. We will analyse his accuracy each issue and maybe do some comparisons against other long and short range forecasts.

We won't give too much away about future forecasts, but after a good finish to the season during March, Ken forecasts a week of wet weather in mid-April before it fines up again. If you are thinking about

taking a raincoat to the Cotton Trade Show in late May, Ken's forecast would suggest not to bother. Although a warm jumper might be needed in the mornings.

Ken produces longrange forecasts for both NZ and Australia and lives in Auckland. He is the author of over a dozen books about weather and climate, including his NZ Weather Almanacs which have been available from 1999 to 2006 and each year reach the NZ bestsellers list in NZ. He uses a combination of the orbits of the moon and some astrology, and he has a popular website www.predict-weather.com offering future weather reports for all main towns in three countries including Australia.

Following is a description, in Ken's own words, of how his forecasting system works and what may be in store for 2006.

Forecasting by the moon

By Ken Ring

Because I use the moon, my ideas about what generates and influences weather are a departure from mainstream science. The theory is that the moon controls the weather. The reason mainstream science fails to recognise it is akin to why folk medicine is no longer embraced. It is not that the old doesn't work, rather it has just been superceded by modern times.

We all know of the phase cycle, new moon to full and back again because we can see the changing face of the Moon. But there is much more to our nearest

celestial neighbour than that, and each aspect of its ever-changing orbit has a different effect on our atmosphere.

For instance, new moons in our summer coupled with 'perigees' can bring destruction, with most rain coming overnight. Perigee means moon closest to earth for the month, which occurs every 27 days and which brings increased turbulence and an exaggeration of whatever is around, either stormy or very hot weather.

In winter, full moons do the damage. A first quarter moon can bring morning rain and in the last quarter rain may be mainly

in the afternoon and evening. Rain most often occurs at moonrise, moonset, when the moon is directly beneath our feet on the opposite side of the earth. In summer if rain is absent, substitute extra heat from the sun.

Either rain or extra sun — what's going on? The reason is the tide of the air. Just like the sea tide, the moon exerts a pull on the five thousand million million tonnes of gas above our heads that we call the atmosphere. It is entirely logical. If the moon's force pulls the ocean tides then surely this same force has to pass through the air to

FIGURE 1: Rainfall forecast for Moree for February–March 2006

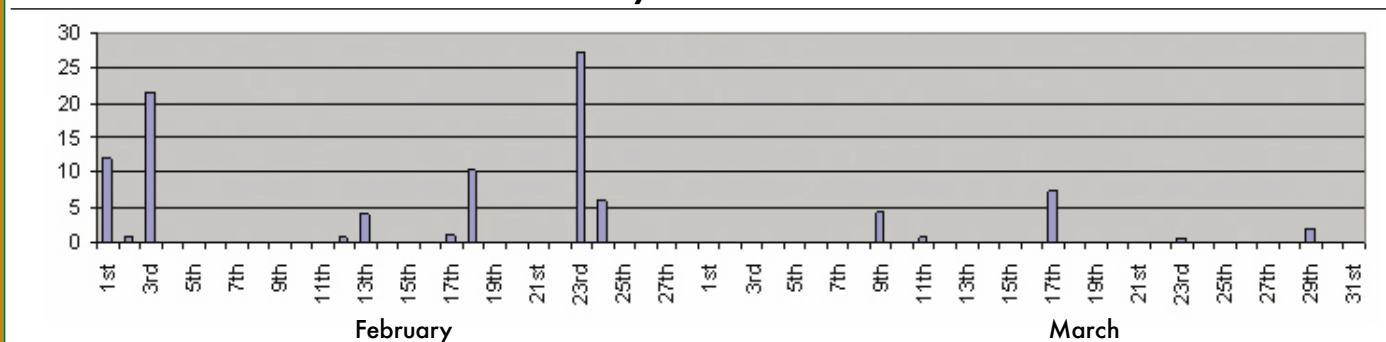
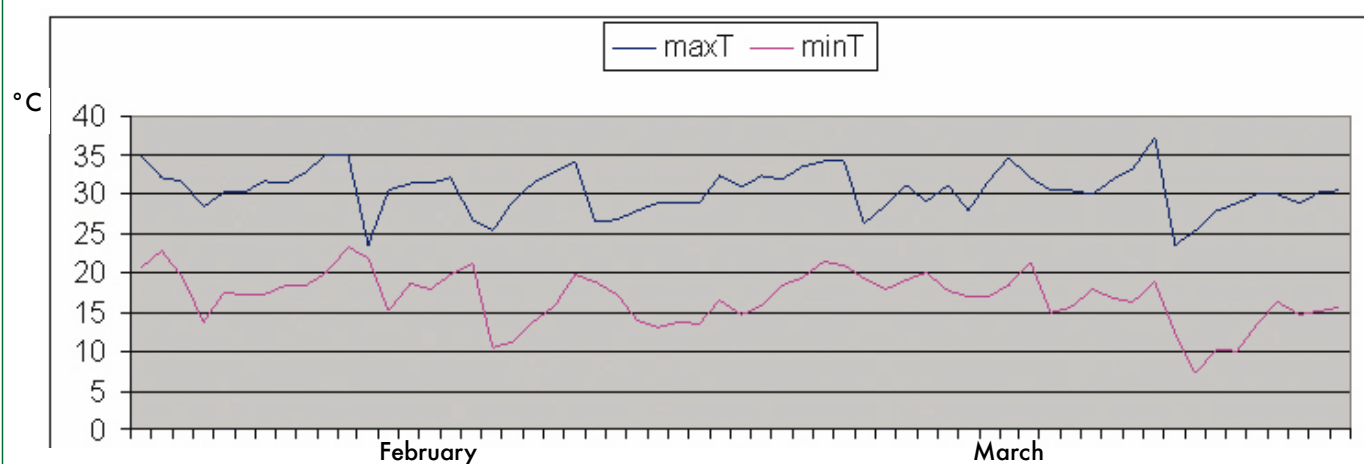


FIGURE 2: Maximum and minimum temperature forecast for Moree for February–March 2006



do so, and so must tidally pull everything along the way including the air.

Meteorologists already know that weather balloons float higher on new and full moons, proving that there is a 'king' tide in the air as well as in the sea at those times. So as the Earth rotates every 24 hours beneath the moon, a constant bulge of air sits beneath the moon and rotates with it.

When the moon rises, the atmosphere gets stretched to higher levels. The setting moon takes the air bulge with it and causes the air level above the horizon to lose height. These variations in atmospheric thickness produce variations in temperature, humidity, condensation and rainfall — depending on the timing of moon rise and set.

MONTHLY CHANGES

There are monthly changes that determine on which day(s) rain will occur. The moon goes north or south throughout each month — the 27.3 day declination cycle. Visibly, declinations are how far north or south along the eastern horizon the moon can be seen to rise. When the moon turns at the southern limit to again head northward, by gravitational pull it tends to drag cooler air up from the poles and over southern districts, generating southerlies.

Droughts are part of the 18.613 year declination cycle of the moon. They occur in the same place roughly every nine years. In terms of the drought-drying-out process, the northern declination affects the north and east of Australia more than it does NZ.

As a general rule of thumb we can expect a drought but also a high rainfall peak, alternating every four to five years.

Let's take one dry area, Canberra, as

an example. Canberra's average rainfall is around 630 mm. The lowest rainfall in recent years was 260 mm in 1982, and four years later in 1986 there was another low overall total of 500 mm, coincidentally the year of maximum declination of the moon.

The second lowest recorded rainfall total was 38 years earlier in 1944 when only 305 mm fell all year. Thirty-eight years is exactly two moon cycles. The estimation for 2005 was 530 mm which is another low trough so Canberrians are due to come out of it, or the pattern that has been in place since records began is null and void.

This is unlikely because a pattern is a pattern. This year Canberra could receive 750 mm and next year perhaps 880 mm. Furthermore, there is no reason why this should not be a widespread trend.

My calculations are that 2006 and 2007 will be a whole lot wetter than was 2005. Most of NSW may get half as much rain again this year and slightly less than the 2006 figure in 2007.

Declination is well known to astronomers, but the decades of compartmentalising of knowledge by universities and of different departments competing for government funding has meant that astronomers and meteorologists no longer have any meaningful lines of dialogue.

Around northern declination time, the top half of Australia receives winds from the north, which are hot and sometimes moist. For instance on November 29, 2004, Sydney struck a record-breaking 42°C. It was the exact day of northern declination.

The very next day the moon began to shift south and the temperature dropped by 20°C.

Fourteen days after every northern

declination comes southern declination when temperatures can be unseasonably cooler in the southern half of the country. The Melbourne hills received snow on last April's southern declination. Sydney is affected by both northern and southern declinations, and so the situation evens out more there which produces a gentler milder climate.

WHAT'S AHEAD?

So what is coming up? The weather should be wetter this year in Australia after mid April as we pass the March maximum northern declination peak of the moon. This pattern should repeat even for places further north.

The further south and west you go, the less change from last year's rain pattern may be expected.

In Brisbane and the extreme east, the winds should tend more from the east. In SA, less cool southerlies and more southwesterlies are expected. Areas of the lower west and lower east this year should see more rain than last year but the further north on the west side, the drier this year could be.

The further northeast you go, the wetter the years may get for the next two. And in the upper Northern Territory, at least this year should be wetter than last year.

So where might be drier this year? Possibly only areas along a line across the upper middle of the country from Broome to Mt Isa.

And for the Commonwealth Games? March 15–23 should be fine and dry, and hot on March 18–21. The 24th should be cooler as a frontal system arrives from the bight, bringing a gusty change and rain. By the 25th, a wind change to SE brings clear weather again, dry and warm. ☀