Has there been Global Warming or Global Cooling in Echuca

Warwick I have spent about 37 years working with processing tomatoes in the Goulburn Valley in Australia, and the last 25 years or so, with research into growing and processing canning tomatoes. Since 1984, our industry in Australia has trebled the tomato yields from our paddocks, which is quite extraordinary. I was wondering whether yields have partially improved due to hotter temperatures, and increased carbon dioxide.

Most of our tomatoes are grown within a 100 kilometre radius of Echuca, so I decided to look at the temperature data from the BOM for that site. It is a high quality site according to the BOM, and has a long temperature record. It also has a small population (10,000?), and therefore should not experience the "Urban Heat Island" effect.

The only other high quality sites in our area are Benalla, and Wangaratta. Echuca is about 200k from the coast and about 100k inland from the Great Dividing Range. So it has an inland Mediterranean climate with hot dry summers and cool wet winters. It is about 36° south and 96m above sea level. North and west of Echuca are flat plains for hundreds of kilometres.

Below is a graph of the Echuca mean temperatures, which is the yearly average of the maximum and minimum temperatures. I was most surprised to find that the temperatures had decreased, rather than increased, and therefore the tomato growth should have been slower with the lower temperatures. So obviously the yields increased due to better tomato varieties and better farming techniques.



I then decided to check Benalla & Wangaratta as well, and low and behold the result was similar, with temperatures decreasing in both cases.





It was suggested by Jo Nova that I contact Frank Ewald Lasner, who has undertaken the painstaking work of graphing all the tempertures around the world. In Australia he has divided the data into different climatic sites, including South-East Australia. His graph for about 52 sites is below. Once again we find that the tempertures are trending down.



I then decided to look at the maximum and minimum temperatures individually from the Echuca site, to understand what was actually happening to them. Surprisingly I found that the minimum temperatures were decreasing, but the maximum trend line was flat.





The thing that intrigued me about the maximum tempertures is the high peaks, which occur at the peak of the odd solar cycles, and four other times, when we had strong El Nino events. (Most recently, three in four years) It is interesting to note that we did not have the Super EL Nino in 1998!

One wonders when our climate scientists graph global mean tempertures for tens of thousands of stations worldwide, that they "miss the wood for the trees." I contacted the BOM some time ago about this phenomenon, but I have not had a reply yet. (Surprising?)

I am not a climate scientist, but an Industrial Chemist, and was wondering whether your correspondents may be able to shed some light on why the temperatures peak very second solar cycle, and secondly, why the minimums are reducing, but the maximums remain steady.

Also the thought came to mind whether there may be a similar site in the US, which may show a similar pattern, but might have the peaks on different solar cycles?

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