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Water or Wine? Irrigation in Viticulture and a return to Dryland Farming

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When *vitis vinifera* is grown outside its indigenous regions, irrigation is often used – but is it necessary? 99% of the water used in wine-making in arid regions, is for irrigation. In fact, irrigation is viticulture's number one Adaptation ally, whilst it is Mitigation's number one foe. Climatologists love wine. The grape is the crop most susceptible to changes in climate, and its migration patterns serve as models for future climate scenarios. The Water Footprint Network reports that it takes 29 gallons (131 litres) of water for a glass of wine (comprising blue, green and grey waters). This calculation would have taken into account the type and frequency of irrigation, planting density, type of rootstock, trellising style, soil properties, varietal and a vineyard's temperatures, wind and sun exposure. It is interesting then, that this thirsty \$300 billion international industry and its water crisis has not come into more focus. An agricultural crop like any other, wine grapes rarely feature in discussions of water competition when in fact, there are regions where local water licenses are allocated to wineries rather than to agricultural crops and livestock. With more erratic harvest conditions existing within increasing temperatures (weather vs climate), the majority of the world's viticulturists are under threat from drought. Is a return to dry farming the answer? This presentation examines viticulture's global water footprint; compares the European model of dry farming, and argues that a return to the historic use of dryland and desert farming is a viable option for sustainable viticulture. South Africa's Swartland is examined as a case study.

Biography

Linda Johnson-Bell has been an expert wine critic, judge and author for 25 years. She has a BA in Political Sciences from Scripps College, California, and diplomas from le SciencesPo, l'Université de Paris IV la Sorbonne, l'Université de Nice and Post-graduate diplomas in Law from Oxford Brookes and the University of Oxford's OXILP. She is CEO and Founder of the newly-formed Wine and Climate Change Institute, an Associate/Viticulture Resilience Expert with the Global Climate Adaptation Partnership, and she is co-producing the TV documentary based on her most recent book, *Wine and Climate Change: Winemaking in a New World*.

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