

Scientists say changing weather may alter taste of gin

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A new study has found that the taste of gin, the UK's favourite spirit, may be subtly changing due to shifting weather patterns and where juniper berries are grown.

Scientists at Heriot-Watt University's International Centre for Brewing and Distilling (ICBD) have discovered that the chemical composition of juniper berries – the botanical responsible for gin's distinctive flavour can vary significantly depending on geographical origin and weather conditions during the harvest year.

Matthew Pauley, assistant professor at the ICBD, said: "A wet harvest year can reduce the total volatile compounds in juniper by about 12% compared to a dry year. This has direct implications for the sensory characteristics that make gin taste like gin."

The study, published in The Journal of the Institute of Brewing, analysed juniper berries from seven regions across Europe, including Albania, Bosnia, Macedonia, Montenegro, Serbia, Kosovo, and Italy, a mix of established and emerging sources for gin distillers.

"Just as wine enthusiasts speak of 'terroir', the impact of climate and soil on wine, we're seeing that juniper has its regional signature," Pauley explained.

The researchers observed stark differences in chemical profiles from berries harvested in different locations, with key flavour compounds affecting the woody, resinous, citrus, and floral notes of gin. In wetter years, like 2017, the berries required longer drying periods, which further altered their flavour chemistry.

Professor Annie Hill, who supervised the study, added: "The least water-soluble compounds are most affected by post-harvest drying. For distillers, this means the flavour profile can shift depending on the harvest conditions. For a multibillion-pound industry that relies on consistency and quality, this represents a real challenge."

As climate variability continues to grow, gin producers may need to rethink sourcing and processing strategies to maintain the flavour standards expected by consumers.