

Ionised whirlwinds could create crop circles

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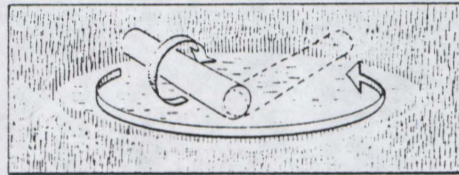
CIRCLES of flattened crops may be produced by a natural weather phenomenon, according to Terence Meaden, of the Circles Effect Research Group. He reports the account of an eyewitness, Ray Barnes, who watched a circle in the process of forming in 1982. Meaden believes the account shows that the mysterious circles are produced by vortices of air, or small whirlwinds (*Journal of Meteorology*, vol 14, p 265).

Barnes saw the circle form in a field in Westbury, Wiltshire, while walking his dog one summer evening. He says he saw a wavefront propagating through the heads of the cereal crop at "about 50 miles per hour" along a path which was slightly curved. The advancing wavefront suddenly swept round in a clockwise direction, creating a circle of "75 foot radius in about 4 seconds".

The corn, which Barnes says was either

winter barley or oats, rustled as it fell to the ground. Barnes also reported a hissing sound. The sky was clearing after a thunderstorm, and it was still raining slightly.

Meaden suggests that a spinning column



A tilted vortex sweeps out a circle like a child's spinning top

of air, whose axis was parallel to the ground, caused the wavefront that swept across the cornfield. When the column, or vortex, tilted slightly, it traced out the circle, just like a child's spinning top.

Meteorologists know that vortices can develop in the lee of isolated hills, but the circle witnessed by Barnes formed on the side of a hill that faced into the wind. Meaden suggests that different patterns of vortices could arise from the interplay between the shape of the land surface and windspeed.

Sceptics of crop circles have drawn attention to the abrupt edges of the flattened circles. Often, a stalk on the outside of a circle stands upright while its neighbour, on the inside, lies quite flat. Sceptics have said that the edge of a vortex should be irregular because of turbulence in the air.

Meaden suggests that sharp margins may develop because the air forming the whirling column is ionised to make a plasma. Carl Benedicks, a Swedish physicist, has suggested that such plasmas may explain ball lightning. □