

Krause, W. 1975. Plans afoot to catch the wind as a source of heat at Efford. *The Grower*. 84(18):793.

One of the latest ideas to save energy is to harness the energy in the wind to a pump which will pump hydraulic oil at high pressure to a heat exchanger. While heat losses will increase with higher wind, the same wind might also help to compensate for the losses.

In a way, the grower of year around crops can make an annual fuel saving of a calculated 20% if he uses his blackout system during the nights. But, other growers can make a saving by ensuring that a heating system is working efficiently and at the correct temperatures. NIAE has shown that a 1°F deviation from the required temperature can result in an 8% waste of fuel. The ADAS surveys seem to prove that this is the area where too many growers fall down too often. In one survey, only 2 out of 5 were using blueprint temperatures, and only one of the two was using the temperatures correctly.

These figures can be misleading because there is a lot of argument about blueprint temperatures, and there are many growers

who think they can do better using their own judgement. The blueprint program is, after all, a production tool which some growers may be more inclined and more able to use than others. Best results are obtained if a man has faith in the tools he uses and is in sympathy with them.

Growers who use the blueprint should obviously make very sure that the temperatures they use are in fact those recommended and this means calibration and accurate settings of control equipment. It is discouraging that one in three growers in the southwest still do not use aspirated shelters for their temperature measuring equipment.

At the boiler end, ADAS has shown that boilers on the whole are about 10% more efficient than air heaters. The conclusion is that air heaters should be capable of working at or above 75% efficiency and most boilers at or above 85% efficiency. Apparently a very large number of growers' boilers do not, and this means a test kit. A one percent improvement in efficiency with a fuel consumption of 20,000 gallons of oil a year will buy a test kit. ADAS reckon that a large proportion of the heating equipment could be improved by at least 5%, and some by much more. Yet only 17% of the growers are using a combustion test kit, after more than a year of high fuel prices!