

winds with westerly components, the actual winds varying between  $340^{\circ}$  and  $210^{\circ}$ . Now if a line be drawn from the most western point of CSIRO seeding at an angle of  $340^{\circ}$  it will be seen that about 90% of the Southern Control area C.2 lies to the east of it, and so 90% of the Southern Control area would lie in the direct path of seeding material. Similarly, if a line from the most western seeding point is drawn at an angle of  $210^{\circ}$  it practically bisects the Northern Control, so exposing about 50% of that area to the seeding material.

After considering Mr. Adderley's paper and performing the subsequent analyses with correlations, I can see no reason to change my earlier conclusions that there is no evidence that the seeding in the Wimmera/Mallee in 1966 has had any noticeable effect on the rainfall. I believe my earlier conclusions are valid, that the case is not proven and that with only one year's operations it is not probable. I had set this out, I thought, fairly clearly in the appendix to my paper, and a simple analogy would be that of a coin which may possess one of the three following attributes:

- (a) it may have a 10% bias towards "heads";
- (b) it may be unbiased;
- (c) it may have a 10% bias towards "tails".

It would seem to me that with one single throw of such a coin Mr. Adderley implies that he can make a pronouncement as to which of the three attributes the coin possesses. From the appendix of my paper and transferring the variance of rainfall of the area to this mythical coin, I am still suggesting that about 50 throws of the "coin" will be required before such a pronouncement can be made with any justification, provided of course that the whole exercise has not been rendered invalid by ineffectual controls.

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#### REPLY

by E.E. Adderley

Mr. O'Mahony, in his letter, has completely missed the point of my paper and has produced only a set of irrelevancies.

The fact that his selections of raingauges are inadequate is shown quite clearly in Fig. 2 of my paper. The high correlation coefficients he quotes, in view of the same Fig. 2, are not appropriate for the purpose and quite irrelevant.

Contamination of a control area by seeding is only relevant in the case of a zero answer. It is irrelevant when trying to explain away a positive result.

Mr. O'Mahony's final analogy is also irrelevant. In the first place it is a bad one and in the second place appears to attribute to me an attitude directly opposed to the statement in my paper that "... it is desirable that operations such as this be repeated for a number of successive years".

Finally I would like to point out strongly that the word "prove" has no relevance when applied to the result of a statistical test.

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