

PROBLEM

Scientific opinion on the beneficial effects of seaweed extracts on plants range from dismissal as “muck and magic” to cautious acceptance (Abetz, 1980). Unscientific opinion is often wildly enthusiastic and claims all sorts of wonderful effects.

INFORMATION

1. Liquid seaweed extracts are sold in garden shops under weedy names like Seasol, Marinure, Maxicrop, Alinure, Algistim.
2. Scientific analysis has shown that the beneficial effects are unlikely to be from the mineral nutrients in the extracts but possibly come from hormones or other organic substances included in the extract.
3. Claims are made that seaweed extracts affect plants in the following ways a) increase frost resistance, b) increase resistance to fungal disease, c) increase resistance to insect attack, d) result in higher yield, e) deeper root penetration, f) increased nutrient uptake, g) better shelf life of fruit and vegetables. It would not be possible for you to investigate a), b) or f) in an acceptable way but other features are open to home experimentation. Alternatively, you might try something new like the effect on keeping qualities of cut flowers.
4. Different batches of extract are known to vary in effectiveness so keep careful notes of which bottles you use for particular experiments.

DESIGN OF EXPERIMENT

1. Carefully read Section D on design of experiments.
2. How will you quantify and record the results of your experiment so that any wishful thinking on your part that the seaweed does or doesn't have an effect, will not influence the measurements.

REFERENCES

- Abetz, P. (1979). An abridged review of liquid seaweed fertilizers (available from RA Bell-Booth and Co., 4/375 Bayswater Road, Bayswater Vic. 3153).
- Abetz, P. (1980). Seaweed extracts : have they a place in Australian agriculture or horticulture? J. Aust. Inst. Agri. Sci. 46, 23-9.
- Chapman, V.J. (1970). Seaweeds and their Uses (Methuen : London).