

THE USE OF AIRCRAFT IN AGRICULTURE.

SUMMARY.

1. It is thought that large areas of the Falklands will give an economic response to low inputs of seed, neutraliser, fertiliser, trace elements, herbicides and fungicides.
2. If a twin-engined land aeroplane is obtained for P.I.C.A.S. it is recommended that it is capable of conversion for agricultural work.
3. A suitable aeroplane is the B.N. Islander.
4. This will in no way obviate the need for overland communications, but will in effect enhance the need, and the economic viability, of permanent overland tracks. The process of development by land and air would be continuous and complementary.

DISCUSSION.

It is common knowledge that Agricultural Aircraft can perform many functions, notably

Sowing of seeds and pelleted seed

Spreading neutraliser and fertiliser

Trace element distribution

Herbicide and fungicide spraying.

It is considered that all these functions would be of benefit to Agriculture in the Falklands as the land is generally acid, deficient in the major elements, calcium and phosphorus; probably deficient in the trace elements cobalt, selenium and copper.

C.F.U. experiments are designed to calculate the economic response to the addition of most types and combinations of fertiliser and neutraliser.

When these evaluations are completed, economic methods of application will be investigated.

However, in the absence of Roads, it is fairly obvious that development at this stage will rely heavily on Aircraft.

LAND IMPROVEMENT.

The more fundamental methods of improving land invariably involve the use of heavy materials and machinery. In the Falkland situation (in the absence of Roads) if economic responses are found by C.F.U. to the use of seeds, neutraliser, fertiliser, herbicides and fungal sprays, considerable advances will plainly be possible with the use of Agricultural Aircraft - and on a large scale. The economic impact would be considerable and measurable. It will be possible to complete a cost/benefit analysis before anything on a large scale is attempted to ensure financial success. This will in no way reduce the necessity for an overland transportation system, but rather enhance the need for it, since if improvements are wrought from the air further, more fundamental improvements will be more liable to be economically successful.

METHOD.

Depending on experimental results those areas most capable of responding economically to single application treatment, e.g. oversewing, would be tackled first. These areas are liable to be the most valuable anyway, and will provide the basis of any future development. The exact areas would be determined from the vegetation map, and the impact of improvement quantified.

This may be done over large areas if a National Development Fund were available or, if not, over parts of individual farms. On the completion of this, the first phase, the ability to proceed with the development of poorer land types will be more viable in cost/benefit terms.

THE AGRICULTURAL INDUSTRY.

At present this is the sole Industry and all Colony funds are dependent upon it. Unfortunately it is true to say that no more wool is produced now than there was 70 years ago. The main reasons for this are:-

- (a) A tiny area of the land (4.8%) is wholly owner-occupied, i.e. run as family business.
- (b) There has been little or no re-investment of capital in the land, resulting in a steady drain preventing any production increase.

To correct this situation it is thought the first phase should therefore be in conjunction with reducing farm size i.e. create more farms, to up-grade large areas and this can only be done at present from the air.

LAND PLANE CAPABILITIES.

There are now few settlements and Islands devoid of adequate runways. The recent interest in runways and land planes has been brought about by the advent of two small private aircraft.

There is at present a British-made twin-engine STOL aircraft admirably suited to our needs which can be speedily converted from passenger carrying to agricultural work and vice versa.

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