

ISMA* Technical Conference

**Wiesbaden, Germany
11-15 September 1961**

**In 1982, the name of the International Superphosphate Manufacturers' Associations (ISMA) was changed to International Fertilizer Industry Association (IFA).*



THE INTERNATIONAL

SUPERPHOSPHATE

MANUFACTURERS' ASSOCIATION

TECHNICAL COMMITTEE - COMITE DES TECHNICIENS

CONFIDENTIAL

LE/61/62
24th July, 1961.

TECHNICAL MEETINGS - WIESBADEN

1961

SYNOPSIS OF INTRODUCTORY REMARKS UPON

LIQUID FERTILISER TECHNOLOGY

to be made by Mr. G.G. Brown (Fisons Fertilizers Ltd.) at the Informal Discussion Group to be held on this subject on Wednesday, 13th September, 1961, at the Hotel Schwarzer Bock, Wiesbaden, at 09.30 hours.

Two types of liquid fertilizers are considered: (i) nitrogen solutions and (ii) NPK solutions. The advantages and disadvantages of liquid fertilizers compared to the conventional dry fertilizers are evaluated. The efforts that are being made to overcome some of the disadvantages of liquid fertilizers are discussed, especially the advances that have been made in the use of wet-process phosphoric acid in various ways and the possible use of potassium acetate in the high potassium liquid fertilisers. The advantages and disadvantages suggested are:-

1. ADVANTAGES OF LIQUIDS

- (a) Liquid fertilizers being completely soluble in water can be used in a various number of ways not only as strong solutions but also diluted in irrigation water and used as starter solutions, as well as foliar sprays.
- (b) Uniform application is easily and cheaply achieved with the minimum of labour requirements.
- (c) A perfectly uniform mixture of plant nutrients results from their use.
- (d) Herbicides and pesticides are compatible with many liquid fertilisers, thus simultaneous application ensures both uniform application and a saving in time.
- (e) Ease of preparation of liquid fertilisers means that process investment costs are low.

2. DISADVANTAGES OF LIQUIDS

- (a) The cost of nutrient raw materials, especially the phosphates, is high and since completely soluble salts are necessary for the manufactured solutions there is a severe limitation to the number of materials that can be used.
- (b) Because of their highly corrosive properties towards certain metals special equipment is required for preparation, storage and application.

(2)

- (c) Complete fertilisers in liquid form are of relatively low nutrient concentration and in general contain no secondary component such as calcium or sulphates.
- (d) In certain cases, especially for ratios high in potassium, only low concentration liquid fertilizers can be achieved, thus the rate of nutrients applied may be limited because of the large volume of water required.
