Liquid Seaweed & Dairy Effluent

Dairy effluent can be used to build up organic material in the soil and is a resource that should not be undervalued. However, its value can be significantly improved if it is mixed with liquid seaweed.
Dairy effluent is rich in material which can loosely be called "food for bacteria" but relatively low in "food for fungi". Therefore the use of dairy effluent leads to a significant increase in soil microbes but the fungi / bacteria balance is dramatically slanted towards bacteria to the detriment of many plants. These include pasture grasses which require a high level of soil fungi for optimum growth.
Ideally for pastures the fungi:bacteria ration should be in the range of 1: to 1:1. (The optimum for fodder crops such as oats is about 1:1). It would not be unusual, even in soil with a good amount of organic material, for the ratio to be greater than 1:3 and in low organic soils to be greater than 1:10.

There are a number of ways this problem can be addressed but probably the cheapest is to use liquid seaweed. Liquid seaweeds which have been finely filtered are usually rather expensive for mixing with dairy effluent and can work out at over $40 p/ha.
One option to reduce costs is to use material, sometimes referred to as filter residue, which is the material removed during processing that contains particles which are too big to pass through the filtration equipment. Another way is to buy liquid seaweed which is, by design, high in seaweed but is not filtered.
(Because the high level of seaweed makes it too difficult, if not impossible, to filter).

Fair Dinkum Fertilizers manufactures 2 products which are "filter residues". These are referred to as RES and REP. These are available in 1000ltr IBC's. These should be added to dairy effluent so that the amount applied is 15-20 litres p/ha.

These two products are similar; RES is very low in phosphate whereas REP contains about 1% phosphorus as potassium phosphate.

Generally fungi are more sensitive to an excess of nutrients than bacteria, and soils which have principally been fertilized with mineral fertilizers are often low in fungi. When used with dairy effluent for pasture and young forestry trees, RES is the most effective way of increasing the "fungal food" level whereas for crops, including fodder crops, REP is recommended.
Liquid seaweeds contain a number of plant growth regulators but it is thought that the compounds responsible for soil fungal growth are break down products of alginate called oligosaccharides and some sugars. There is also an effect due to plant growth regulators in the seaweed which cause the plant to send material out into the rhizosphere, (the region around the roots). This material, referred to as root exudate, feeds bacteria and fungi in the rhizosphere enabling them to modify minerals in the soil so that they can be absorbed by the roots.

RES Liquid seaweed is a process by-product which is high in alginate break down products (carbohydrates). It contains some plant growth enhancers and typically contains over 20% seaweed derived material together with potassium sulphate and other potassium salts. It is high in sulfur, (as sulphate). Being a process by-product its composition is more variable than that of our other products. This product is suitable for use in centre pivot irrigators, as a seaweed source for compost mixers and when diluted as a component of worm feed in vermiculture systems.

REP liquid seaweed is a process by-product which is high in alginate break down products (carbohydrates). It contains some plant growth enhancers and typically contains 20% seaweed derived material together with potassium phosphates and sulphate and other potassium salts. It is relatively high in phosphorus, about 1-2% as potassium phosphate). Being a process by-product its composition is more variable than that of our other products. This product is suitable for use in centre pivot irrigators, as a seaweed source for compost mixers and when diluted as a component of worm feed in vermiculture systems.

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Fair Dinkum Fertilizers

manufacturers of quality seaweed products

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