Humic Acid
Is it possibly a supplement we can use?

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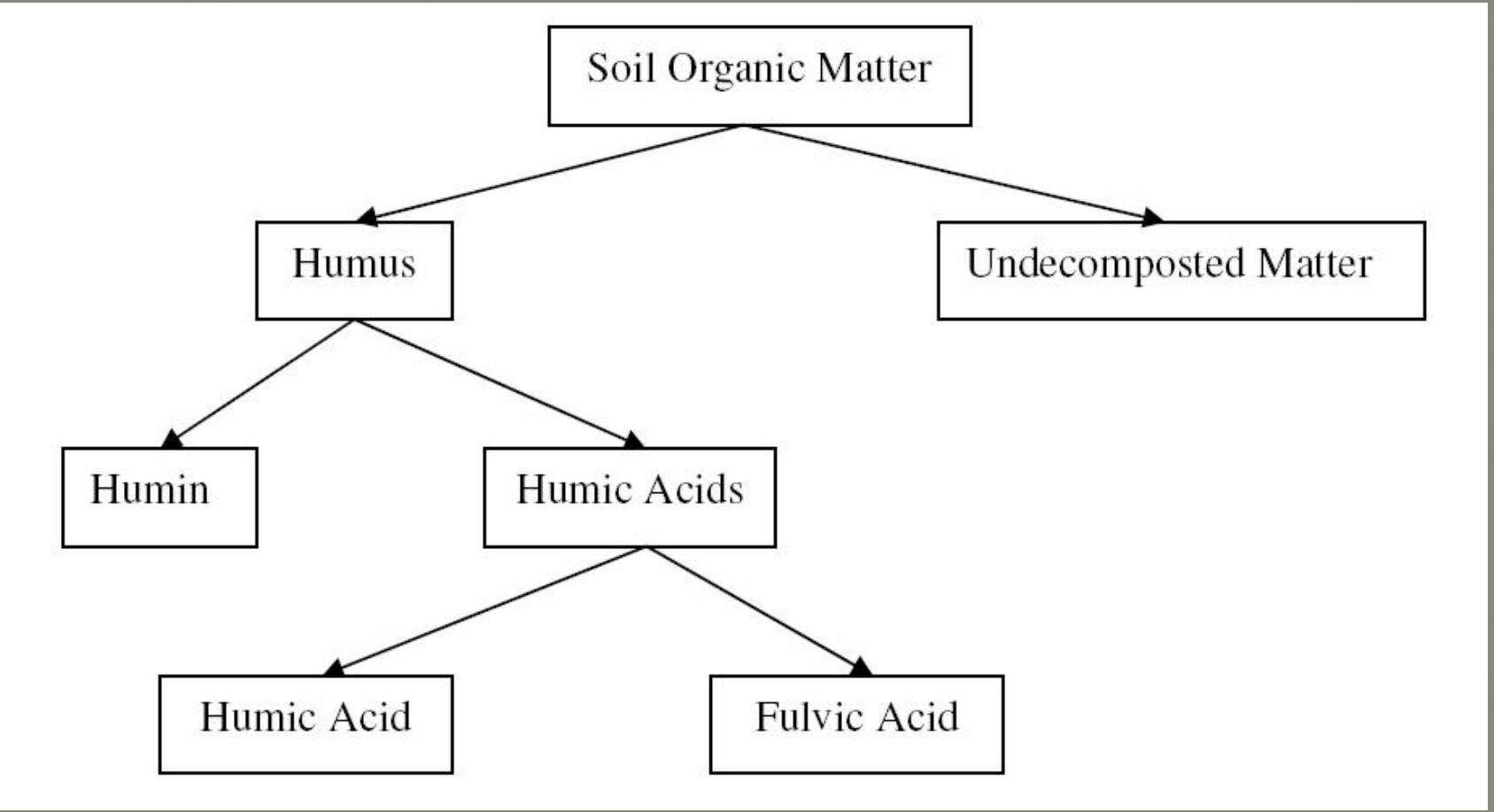
Humic Acids

- Where did I first learn about it?
- Humic Acid is probably the most common carrier in the many "biologicals" that are being marketed today.
- The use of Humic Acid will not compensate for poor management.
- It will not harm the seedling at label rates.

Where do Humic Acids Come From?



What is Humic Acid?

- HA defies a precise definiton. It is a black or very dark brown high molecular weight organic polymer.
- The color has been used very effectively as a sales or advertising attribute – conjuring up images of dark fertile soils.
- Chemically it contains more carbon and less hydrogen than other animal & plant residues

What is Humic Acid?

- It has very high cation exchange capacity (CEC) – 500 to 600 meq/100 g soil (sandy soil - 3 to 25 meq/100 g soil)
- Because it is the end product of biological decay of OM, it is very resistant to further decomposition. Estimates of breakdown are 0.3%/year under ideal conditions.

What is Humic Acid?

- It acts like a chelating agent – making micronutrients such as iron, copper, zinc and manganese more readily available to the plant.
- It greatly improves phosphate availability.
- It is not a fertilizer, by itself it will not directly provide nutrients for the plant.
- It does complement or help improve the fertilizer use.
- It helps buffer pH change.

Coop Studies

- 2008 & 2009 – GH studies comparing HA and a number of biologicals of growth of slash and loblolly pine
- 2009 – study at 2 nurseries looking at 3 rates of granular HA.