Logistical problems for reformulation of the product:

1. Patented process used for thousands of metric ton production per year, and is sold worldwide
2. Glycerin Oleate is the most effective defoaming agent we have found and can be used at a very low concentration
3. We are unable to find an acceptable inert that does not have some negative impact on physical/chemical properties of product – primarily the dispersion characteristics ie. Alka selzer – blooms when added to water
4. Any change in formulation would significantly impact quality and quantity of production (There is a very large world-wide demand for micronized sulfurs for the reasons I mentioned previously)
5. Any change would require a lengthy review of our production process, field efficacy as well as a Regulatory review of the product before this inert can be changed.

Cerexagri hopes that this very small inert in Microthiol Disperss will be accepted by the National Organic Standards Board and we can therefore offer organic growers another alternative in their crop protection program.

Thank your for allowing us to be on your program today. Are there any questions??

Bill Elam

5/13/03 public comment session

Good morning, I am Beth Sears, Product Manager for Cerexagri, Inc., a relatively small global agrochemical company that has been in the crop protection industry for over 70 years.

I would like to make a few comments about our product, Microthiol Disperss and its importance to organic growers and why it is difficult for us to reformulate the product with an another defoamer:

Product Microthiol® Disperss®, an 80% dry flowable sulfur used in agricultural crop protection for almost 20 years. Before National Organic Standards – was used by many organic growers, especially in the PNW.

Formulation is a micronized wettable sulfur:

- Labeled for use on over 60 crops – tree fruit, nuts, small fruit, vegetables, row crops, herbs, many of which are organically grown – mite control, powdery mildew - are of the most common disease of western crops
- Worker Friendly Product:
  - Little to no dust (vs. WP and dusting sulfurs with high % of dust)
  - Minimal PPE required, 24 hour PHI
  - Can be used in any spray equipment from backpack sprayers to airplanes.
  - Can be used thru irrigation systems
  - Compatible with Bordeaux mixtures, copper fungicides, liquid fertilizers and most other agrichemicals used in agriculture

- Immediately disperses in water, stays in suspension longer than WP due to small particle size
- Up to 30% less sulfur is needed on a per acre basis due to
  - Finely ground particles (better coverage on plant)

- Superior sticking ability (dusts essentially are removed by wind) no spreader/sticker adjuvant are required
- Excellent mixing ability (most growers use a tank mix of 3 or more different products).
- Growers can increase spray interval between sprays (fewer sprays)
- Growers are putting less sulfur on the crop vs. WP or dusting sulfurs

Now, a few comments on our formulation of Microthiol Disperss and the inert: glycerine oleate

Glycerine Oleate is used as a defoaming agent in our product, and is a combination of two esters - glyceryl monooleate and gylceryl dioleate
CAS #37220-82-9

This inert makes up only .05% of formulation and is needed:

- As a defoamer defoaming agent
- Mechanical agitation, essential for commercial sized farms/operations, aggravates any product with potential to foam
- The foam that does not quickly disperse is the main problem in spray tanks
  - Foaming can adversely affect tank filling, may increase potential for tank overflow
  - Foam coats inside of sprayers, leaves residue in tank for next application - eventually can clog nozzles
  - Using several chemicals together in a tank mix can increase the potential for foaming
- This defoamer very effective in extremely low amounts – 0.05%

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