

Business Newsletter . . .

International Food Additives Action

A joint conference held recently in Geneva by UN's WHO and FAO concluded that international action on food additives is necessary. First step in recommendations is development of **uniform methods for evaluation of safety** of additives. Priority was recommended relative to food colors, preservatives, and emulsifiers. Materials unintentionally added, **such as pesticide residues**, also were recommended for early attention. Prompt action is urged as many countries now are reviewing their legislation.

Atomic Agricultural Research

Two rural electric power cooperatives and two investor-owned utilities have joined hands in presenting the University of Minnesota's Institute of Agriculture a \$100,000 five-year research grant for studies of **applications of atomic energy to agriculture**. The donors were: Central Power Electric Cooperative, Minnkota Power Cooperative, Northern States Power, and Otter Tail Power. No strings are attached. Only specification is that projects made possible by grant "generally be **fundamental in nature** and make use of atomic science in solving agricultural problems."

Farm Land Prices Rising

Despite the heavy conversation about drop in farm prices and income, land prices have continued to rise. According to USDA reports, U. S. averages went up about **5% in the year** ending in July. Minnesota was a leader with prices up 9% while averages ran 5 to 6% **throughout the Middle West**, as well as along the **East Coast**. Wyoming and Vermont were down 2% and Maine down 4%.

D-D by Tanker

Shell Chemical's new 1,260,000-gallon **storage facility** at Wilmington, N. C., received the first shipment of soil fumigant D-D by tanker from the plant at Houston late last month. The new arrangement will allow the nematicide to be drummed at Wilmington for sale to farmers in the Southeast, whereas Shell previously had to ship it in drums all the way from Houston.



- Deep placement of fertilizer is being found to give better root systems and to facilitate better use of water at greater depths (p. 893)
- Agronomists think the number of fertilizer grades could be reduced with advantages to farmers and fertilizer manufacturers (p. 894)
- USDA's fertilizer situation report indicates that U. S. will become net exporter of potash for first time next year (p. 899)
- Ultrasonics will probably find uses in food processing but at present the new techniques are probably overpromoted (p. 900)
- Fertilizer sales up in all areas except Midwest; concentrated super production on rise, but normal super production still finds use (p. 918)

International's New Triple Superphosphate assures more

complete ammoniation

ONE look shows you why International's new Triple Superphosphate offers such a big advantage in ammoniation. Its improved fineness of texture; uniform, dust-free particles; and correct chemical structure assure maximum ammoniation in minimum time — help cut your manufacturing costs. International's new Triple Super is made by an improved process from high quality rock. Result: a high analysis product

(46% A.P.A. or better). Special conditioning before shipment helps prevent setting up en route. This, plus improved particle size, means less grinding before mixing, more economical handling, better texture in your finished products and high product performance. International's new Triple Super is ready for immediate delivery to your plant. Write or wire the Phosphate Chemicals Division for samples and quotations.



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Research Newsletter . . .

Antibiotic Growth Effects

From the recent International Congress on Antibiotics have come several theories on growth stimulating effects of antibiotics. In addition to the control of subclinical levels of disease, they include: **stimulation of vitamin producing organisms** and control of those competing with hosts for vitamins; thinning of intestinal walls with better absorption of nutrients; direct stimulation of growth. Taylor and Gordon in England recently reported that inactivated penicillin showing no antibacterial activity stimulated growth in pigs. Luckey at Wisconsin reported **growth stimulation in germ-free chicks**.

Weapon Against DDT Resistance?

A research group under the Israel Defense Ministry has found that diaryl-(trifluoromethyl)-carbinols are **effective synergists for DDT**. The report in *Nature* suggests that the results with di-(*p*-chlorophenyl)-(trifluoromethyl)-carbinol appear to fit into the pattern of ideas set forth by the California Citrus Experiment Station group on relation of structure to activity. Structural similarity allows the synergists to occupy preferentially the **site at which DDT is metabolized** and thus inactivated.

Better Litters with Antibiotics

Increases by one or two pigs per litter reaching weaning stage were reported by N. R. Ellis, USDA, where sows were fed antibiotics. While no more embryos are carried to full term, more live pigs are delivered at birth and mortality during first few days of life has been reduced. With poultry fed antibiotics, there is some evidence of improved hatchability of eggs and **some beneficial carryover effects** in chicks.

Ryania Promising Pesticide

Ryania, an insecticide obtained from a shrub in Trinidad, is showing promise as a selective insecticide for apples. Results of four years' testing by West Virginia Agricultural Experiment Station show that ryania, which is **exempt from residue tolerance** on growing crops, is highly effective against codling moth. DDT kills mites preying on such harmful pests as red mites. Ryania **doesn't harm the predacious mites**. Furthermore it is not injurious to plant tissues and is comparatively safe for man.

Biological Control of Plant Disease

Control of **soil-born fungus diseases** has been successful among some ornamentals by the use of counteracting fungi by plant pathology researchers of University of California at Los Angeles. Soil is either steamed or chemically fumigated, then inoculated with the controlling organism, as well as nitrogen fixing microorganisms. **Damping off in peppers**, caused by the widespread fungus *Rhizoctonia*, thus has been prevented under greenhouse conditions.



- Russian researchers claim their use of radioactive isotopes has yielded information on nutrient utilization, fertilizer placement (p. 896)
- Water-miscible emulsions of piperonyl butoxide and pyrethrins, free of mineral oils or objectionable ingredients, can be applied directly to stored grain (p. 932)
- Toxicological study indicates trinitrobenzene-aniline complex is safe as rodent repellent for nonfood use, but operators should be cautious (p. 936)
- Carbon-14 used to trace fate of proteins and amino acids in sheep rumen (p. 948)