

Business Newsletter . . .

Boll Weevil

Heavy rainfall has resulted in serious boll weevil infestation in a large area of the cotton belt according to the National Cotton Council. Control is mounting problem in many areas because of rank growth which makes it difficult to get into fields with ground application equipment. **Almost daily rainfall** has kept machines out of fields. Even if poison is applied it is washed off before it has time to kill weevils. State extension officials report: from Mississippi, **boll weevils are out of hand in some areas.** Farmers stand to lose a top crop. From South Carolina infestations are serious in nearly all fields throughout the state with weevils "taking over" in some areas.

Crop Dusting Down

Agricultural flying was down about 10% in 1954, from the high of 1953, according to report just released by Civil Aeronautics Administration. **A total of 651,000 hours were flown** in 1954. Almost 40% of flying was for aerial spraying of crops, about 31% was for dusting, 10% for fertilizing. Accident rates were about the same as 1953. There are about 48 accidents per 100,000 hours flown; about 6.6 of these were fatal.

Farm Population

U. S. farm population has dropped approximately 3 million from 1950 according to estimates prepared by Census Bureau. Number living on farms in April 1955 was about 22 million contrasted to 25 million in 1950. Farm residents now represent about **13.5% of total population;** downward trend has been particularly marked since the beginning of world War II; between 1940 and 1945 number living on farms **decreased** by more than **5 million.** After war there was a temporary return to farms, but after 1948 downward trend was resumed. Of the 8.2 million employed persons living on farms, 62% are employed in agriculture.

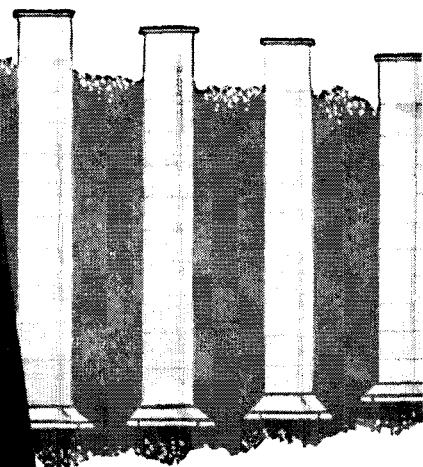
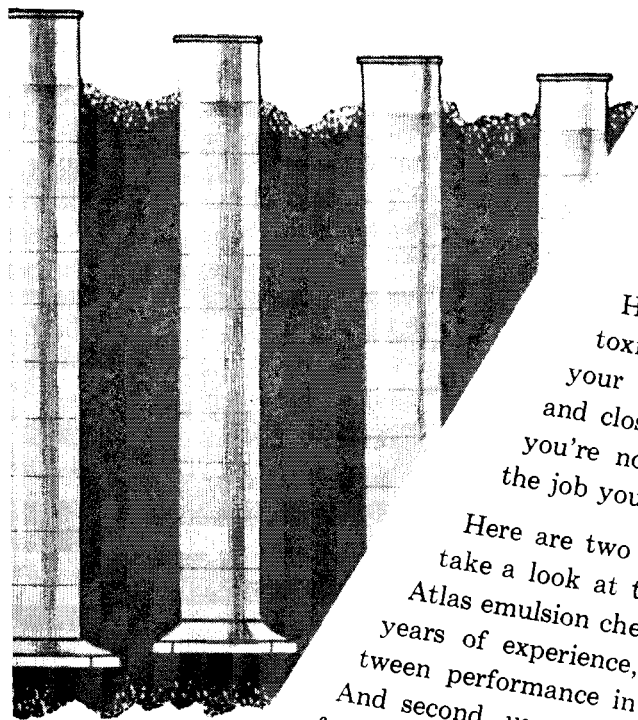
Russian Farmers

Russian farm experts stopped off in Washington having concluded their tour of Middle West. Items which most impressed them about American agriculture: hybrid seed corn and hybridization of poultry and hogs, handling of beef and meat packing industry, sorghum, versatility of tractors. The Russians said they were very much impressed with the facilities of the state colleges and universities, especially the patterns of agricultural communication, colleges and universities disseminating information to the farmers. Russians apparently were truly interested in agriculture not politics, pointed out **principal differences between U. S. and Russia are in erosion control and insecticides.** Russians apparently have tried soil conditioners on large scale to control erosion.



- Despite its objections on pesticide mixtures, fertilizer industry is selling increased tonnages of pesticide fertilizer mixtures (p. 724)
- Low cost pump means small farmers can own liquid fertilizer application equipment, may be a factor in future nitrogen marketing (p. 725)
- Miller Amendment seems to have caused confusion among growers who want specific instructions from extension people on what pesticide to use (p. 726)
- A research and marketing opportunity exists for compounds which can delay bud development of crops (p. 727)
- Marketing survey reveals extension services top influence on farmer pesticide purchases (p. 738)

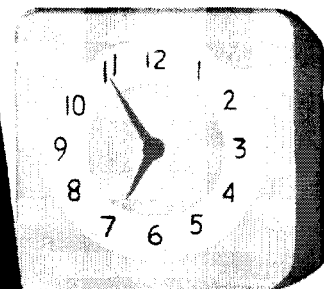
High scores on any toxicant emulsion test ... with matched ATLOX[®] emulsifiers



How do you evaluate your toxicant concentrates? Unless your test methods are consistent and closely simulate field practices, you're not getting a true picture of the job your emulsifier is doing.

Here are two suggestions from Atlas. First, take a look at the evaluation methods which Atlas emulsion chemists have developed, through years of experience, to give close correlation between performance in the laboratory and the field. And second, use a matched Atlox emulsifier in your formula. You'll be sure of top performance.

Many other important factors need consideration in choosing the right emulsifier for your product. If you will send us the information listed in the table below, we'll be glad to recommend an Atlox emulsifier that fits every requirement of your specific toxicant concentrate.



EMULSION DATA CHECK LIST

1. Toxicant used _____ ppm.
2. Solvent used _____
3. For water hardness _____
4. Recommended dilution _____
5. Lbs. toxicant/gal. of concentrate _____
6. Desired emulsion stability _____
7. Shelf life period expected _____
8. Ease of dispersion important? _____
9. Packaging: bulk _____ or small container _____
10. How is concentrate mixed and evaluated in laboratory tests? _____

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Research Newsletter . . .

Granular Insecticides for Corn Borer

Granular insecticides are as good, or possibly better than conventional emulsion sprays for control of corn borer according to report from USDA. An additional advantage, granular insecticides leave much less residue on corn plants. Residues are important to some farmers who graze livestock in their cornfield after harvest, or put up corn stalks as silage. Granular forms of DDT, EPN, and heptachlor leave **100 to 200 times less residue** on corn leaves than emulsion sprays, about half as much residue where leaves join stalk. Granular insecticides do not cling to leaf surface, slide into leaf whorls where corn borers do most of their feeding. Tests showed **no significant difference in effectiveness** of the three granular insecticides; DDT, EPN, and heptachlor.

Shrimp Test Residues

Brine shrimp, readily available as tropical fish food provide an excellent test for the presence of insecticide residues. Insect pathologists at USDA's Research Center have found that the shrimp react to extremely minute amounts of insecticides, **1 part per 100 million**. Shrimp react to these low levels of all insecticides tested; **chlordan, DDT, lindane, methoxychlor, and toxaphene**. Another advantage: there is no supply problem with these bioassay animals (eggs can be stored for years and are readily obtained at tropical fish stores).

Superchill

A test project to ship frozen foods **without refrigeration** is currently being sponsored by Grace Lines, Libbey, McNeil & Libbey, and Aluminum Co. of America. Test involves the use of insulated aluminum containers filled with frozen foods. Containers and contents are superchilled to -350° F. **With liquid nitrogen** container is then shipped as freight. In test with container exposed to draft of heated air, 52 days elapsed before contents of container reached 0° F. A superchilled shipment is now on its way to Venezuela via a Grace ship, testing commercial application of the container.

Brick from Rice Hulls

Bricks made from rice hulls may be good for atomic radiation shelters, according to LSU researchers. Although not comparable in strength to adobe brick, the LSU brick is lighter and probably a better heat insulator. It can be made by farmers for no more than 5 cents each, if the farmer has the proper equipment and a supply of rice hulls. The bricks, they say, are made from equal amounts of **rice hull ashes and soil**, with emulsified asphalt and water added. Federal Civil Defense Agency is testing the brick for **protection against fallout**.



- A method has been developed for determination of dieldrin residues as low as 0.1 p.p.m. on agricultural commodities (p. 757)
- Comparative toxicity studies indicate indandione derivatives may be superior to warfarin as rodenticides (p. 762)
- Comparative studies of thermal process phosphates with triple superphosphate and phosphate rock indicate that plant response to phosphates depends to some extent upon the soil (p. 765)
- DPPD interferes with analysis for carotene in feeds; a simple test for the antioxidant has been developed to be used before carotene is analyzed (p. 788)
- Dry activated sewage sludge is a potential source of vitamin B₁₂ which can be used effectively as a supplementary feed ingredient for pigs and chickens (p. 795)