

# What About Trace Minerals?

## Controlled Experiments Are Underway on South Missouri Farms

By ED RUPP

**WHAT** about those trace minerals? Are we getting anywhere in learning more about them?

A little more than a year ago Missouri Ruralist reported certain experiments taking place in the vicinity of Springfield, Mo., on relationship between trace elements and health. Human health, animal health and health of plant life.

Dr. Ira Allison, Springfield, had treated several undulant fever patients with trace element therapy as the background for his experiments. Results were almost incredible. Public attention was given to the experiments thru a clinic arranged by Doctor Allison in December of 1947.

There was another similar clinic last month in Springfield. A group of about 75 persons representing a varied field in everyday life was present to see for themselves, ask questions of the patients as well as of the doctors and others seated around the questioning table.

After another year of treatment for undulant fever, results again are along that same definite trend. Even after years of treatment for the disease by other means, patients showed no improvement. There seemed to be a definite pattern in each case. At first a marked improvement, then settling back to original condition and possibly worse.

Beginning with patients whose blood tests were definitely positive, the trace element therapy seems to work an almost immediate improvement. After 4 or 5 months on trace element therapy and improvement of diet, blood tests become negative to undulant fever. Not only that, but patients questioned at the clinic said they felt better. In some cases they were able to get up out of bed and go to work.

### All Had These Symptoms

Testimonials of the undulant fever patients were so similar that one transcribed record would nearly suffice for each case. First the symptoms: Alternating fevers and chills, loss of weight and strength, despondency, fear of imminent danger, pains and aches in muscles and joints and others. After treatment by Doctor Allison each testified to general improvement and relief.

Between 45 and 50 of Doctor Allison's patients had volunteered to tell their individual stories. Ages of patients ranged from about 12 to nearly 80 years. Patients came to the conference room one at a time. But time ran out. Only 15 or 20 of the patients could be heard in one day.

In about 2 years time approximately 1,800 patients have been treated, Doctor Allison says.

On the day following the clinic, visitors were taken to the farms operated by George Nicholson and Sons, near Springfield, where controlled experiments now are underway with respect to trace elements and their relationship to plant and animal health. These experiments are under the direction of Arnold Klemme, Extension agronomist at Missouri University. Professor Klemme now is on a year's leave of absence for that purpose.

Basically, the experiments on this farm will be to determine the result on farm crops from the replenishment of

essential minerals in the soils. An attempt will be made to lend further proof to the theory that quality crops are dependent on adequate supplies of all essential minerals in the soil.

Soils on this farm were tested with standard laboratory equipment to determine the level of basic fertility elements. Then the presence of trace elements and the amounts were determined spectrographically.

Basic acre treatments for the soil included 750 to 1,000 pounds of raw rock phosphate, 100 pounds of muriate of potash, 1,000 to 1,500 pounds of dolomitic limestone to provide calcium and magnesium. All applications were according to requirements of specific fields. In one case before dolomite was available an application of 100 pounds of Epsom salt was applied to supply magnesium.

### Applied This Mixture

Then in addition to those basic treatments a 100-pound mixture of trace element compounds was applied on each acre. This mixture contained 60 pounds of manganese sulphate, 10 pounds of fertilizer borax, 10 pounds of zinc sulphate, 5 pounds of cobalt sulphate and 15 pounds of copper sulphate.

To supply nitrogen needs, 100 pounds of ammonium nitrate an acre will be used on all small grains and on new pasture seedings.

In each field 3 check strips have been left which will be used to compare production results on food quantity as well as quality. These crops will be checked for quality by laboratory means first. Then in the future they may be checked for their value to animals thru actual feeding experiments.

In the meantime the Nicholson dairy herds are being fed trace minerals in their normal rations. Results, altho incomplete, so far are quite astounding. In the first place there was breeding trouble. Calf crop a year ago was despairingly low. This year the calf crop was in the upper percentage brackets.

At the same time the Nicholson herd ranked high in the dairy herd improvement association in February. And the highest-producing cow in the association was in the Nicholson herd.

Further experiments on the relationship between soil fertility, plant and animal health will be conducted on the Herman Mowery farm, in Webster county.

Possibly the most interesting moments during the clinic came during the discussion periods when no patients were in the conference room. It was during these times that indictments were heard of our dietary habits as a civilization. Habits which have led food processors into extracting nutritive qualities by the barrelful from normally good foods and putting back a pinch of synthetic nutrition. All to satisfy the taste of the public rather than their nutritional needs.

One bone of contention was our favorite white bread. Actually, these men and women claimed white bread is so low in actual good qualities that rats and mice won't even tear open the wrapper. If a grocer would stock whole wheat bread made from whole wheat flour, rats and mice would invade the shelf from miles around. Still they would leave the white bread alone, nutritionists claim.

Then there was another indictment against pasteurization of milk. Heating milk thru pasteurization to the point where harmful bacteria is killed will also destroy beneficial bacteria, they claimed. In other words, clean, low bacteria count raw milk carries more nutritive qualities than the same milk pasteurized.

Then, too, habits of cooking and food preparation as well as balanced meal planning came in for body blows. A high level of carbohydrates or of sweets could be detected running thru the diets of the patients. And too often green and yellow vegetables were cooked for hours instead of a few minutes to retain as many health-giving qualities as possible.

There will be more news about trace minerals in the U. S. as time goes on. There seems to be a rapid awakening to their importance.

As results from experiments and research become available they will be reported to you in Missouri Ruralist.



Remarkable recovery from undulant fever thru trace-mineral therapy. That was the testimony of one patient after another during the most recent clinic in Springfield. Seated at the questioning table lower left are J. F. Wischhusen, Manganese Research and Development Foundation, Cleveland; Arnold P. Yerkes, supervisor, farm practice research, International Harvester Co.; and back to camera, Dr. William Albrecht, head of soils department, Missouri University. On opposite side of the table left to right are G. W. Bunting, Central Farmers' Fertilizer Co., Chicago; Dr. H. Trautman, Madison, Wis., physician; and Dr. Ira Allison, Springfield. The patient in this case was a young boy.