

A day or two ago I said to a farmer, "Tom, what about this — manure for the potatoes?" [The dash is not an expletive, but the name of a firm of chemical manufacturers.] "Oh," he said, "we mun use it. Our customers won't look at little uns and we've got to have the weight; but"—here he smiled slyly—"we allus set two drills for ourselves *wi'out it*."

To return to our references, one of many would alone carry conviction—about Sir Albert Howard's oxen at Indore. Fed on the product of his 300-acre farm, entirely manured with compost, they never took the foot-and-mouth disease or the rinderpest, "which frequently devastated the countryside." Sir Albert told me he had seen his animals rubbing noses with his neighbours' cattle, which at the time were streaming with foot-and-mouth disease. Yet nothing happened: his beasts were immune! Finally we pointed to the explanation given by Sir Albert Howard of the effect of the compost: not only does it re-create the crumb structure of the soil and furnish the soil population with food—that population includes earthworms, which aerate the soil, and which chemical fertilizers drive away—but it (compost) "is essential for the full activity of the *mycorrhiza*." It is because of *that*, to answer Dr. Bomford, that you can *not* beneficially interfere with the natural cycle by chemical means. In the presence of "inorganics" the *mycorrhiza* (the root-investing fungi which act as the intermediary between the humus and the plant, their mycelial threads actually entering the root-hairs and being therein digested) disappear!

"When plants like French beans are grown on poor soil by means of artificial manure the produce is tasteless and of poor quality. For real taste and quality it is necessary to use humus made from vegetable and animal wastes or farmyard manure. A supply of combined nitrogen appears to reach the plant by way of the nodules [the nitrifying nodules on the root-hairs of the Leguminosae] and root-hairs; and materials which are needed for quality appear to be absorbed by the *mycorrhiza*. . . . The *mycorrhizal* association occurs in most if not all our crops—cereals, fruit trees, grasses and clovers, hops, strawberries, vines, bulbs, and so forth—and it at once explains why farmyard manure gives better results than artificials. . . ."

Dr. Bomford invites us to refrain from taking sides in this matter. We cannot refrain. It is a primary concern of preventive medicine. The water-culture of tomatoes—and tomatoes are one of the few food crops in which the *mycorrhizal* association has not so far been found, I am told—may, as Templeman and Watson<sup>1</sup> say, "always be of academic interest"; but that should not deflect attention from the great national problem of dwindling soil fertility and of the present ignorance—terrible in view of the need—of the means of restoring it by town wastes. Southwark alone seems to be alive to their value, and sold last year £2,715 worth of ashbin rubbish for composting. Should any still feel that the value of humus-grown food for human beings is in doubt a perusal of Dr. Wrench's *Wheel of Health* would be convincing.—I am, etc.,

Holmes Chapel, May 14.

LIONEL JAS. PICTON.

### Medical Man-power in War

SIR,—I was interested in the letter from Mr. H. J. McCurrich in the *Journal* of May 13 (p. 1002). First let me take his statement regarding the proposed precautionary period of training for anti-aircraft units this year, which is exceptional in the annals of the T.A. training scheme in that a period of four months' training has been declared necessary until the Militia have been

<sup>1</sup> *J. Min. of Agric.*, November, 1938.

trained, though this does not necessarily mean that the anti-aircraft units will be called up for the whole of that period. According to a recent statement by the Secretary of State for War in the House of Commons, the units will be called out in rotation for a period not exceeding one month, and such service need not necessarily be for a consecutive period. In fact two weeks of this month represent the normal annual camp period, leaving us seventeen extra days which we have to put in. This is a hardship in many cases, I am prepared to admit, but as we are living in abnormal times we must be prepared to take the rough with the smooth. Secondly, Mr. McCurrich quotes the case of two medical men who have volunteered for service in the medical branch of anti-aircraft units. Presumably on receiving their commissions these doctors understood clearly that they must be prepared to be called up with their units in advance of the other field service units at any time and for any length of time in an emergency or precautionary period, and also their general obligation to attend annual camp of fifteen days unless they claim exemption on special grounds such as illness or domestic reasons. When Mr. McCurrich states that these medical officers are fully trained, does he mean that they have received R.A.M.C.(T.A.) training, which certainly calls for a great deal of work—far more than attendance at sick parades and signing sick reports would imply? If medical officers feel that they cannot put in their annual training they are obviously not of much use to their unit, and in that case a branch of the Supplementary Reserve R.A.M.C. will take medical officers who wish to serve in the event of war only.

Mr. McCurrich's argument, if pushed to its logical conclusion, makes me wonder if the serving Territorial medical officers have not wasted their time all these years putting in attendances at annual camp, often at considerable expense and dislocation of their practices and family holiday arrangements, to make themselves efficient in the event of war.—I am, etc.,

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London, S.W.15, May 14.

SIR,—I hope Mr. H. J. McCurrich will not consider my remarks a personal attack on himself or his colleagues in Hove. His letter, however, illustrates exactly the attitude of the majority of general practitioners regarding the handling of air raid and war casualties, if unhappily we are involved in war in the near future. Briefly, their attitude is—as Mr. McCurrich says—they "do not require training." With all due respect I say most emphatically they do require training. Let us see in what respects their civilian training is deficient. These opinions are my own, and I shall not object to criticism. I shall only deal with a few points to keep my letter within reasonable bounds.

*Organization and Administration.*—How many general practitioners have any idea of the organization and administration of a "dressing station"? We must remember that if war comes it will come suddenly, and general practitioners will find themselves shot into the thick of having to deal with hundreds of casualties amidst an undisciplined and terrified population. A single raid will only last about five minutes at the outside, but enormous damage will be done in that time. A single 500-kilo bomb in Shanghai hit a large hotel and produced nearly 350 casualties, 145 of whom were killed outright. It was a modern hotel comparable to the best in this country. I have lunched and dined there often. "Dressing stations" here are, I believe, intended to deal with 100 "lying" and 100 "sitting" cases, but probably the "lying" will outnumber the "sitting" cases.

The first problem in administration concerns the "lay-out" of the dressing station. What is required? (a) A "receiving