

TUBERCULOSIS.

By WM. COOK IN *Poultry*.

IN an article written by Professor Woodroffe Hill, which appeared in last week's issue, there are a few paragraphs I should like to refer to. He says, "I feel constrained to state that neither a lack of sharp grit nor a too liberal supply of maize will produce tuberculosis, and I further assert that no amount of experience in poultry farming can produce evidence that tubercle can originate from such a source." Now, I have had a little practical experience on this subject, and must say the professor is wrong here. I would go into any farmyard if he likes where there are a large number of fowls, and select twenty birds and feed them on wheat, barley, French buckwheat, or anything of that kind I may choose, at the same time giving them grit, and I will take another twenty and feed them on Indian corn and give them no grit except what the birds pick up in the ordinary way, and would prove the statement he makes on the subject is wrong. Of course to test this properly the birds would all have to be of the same age, bred from the same stock and kept under the same conditions, I should like to ask the professor if he ever tried an experiment of this kind. I am aware he is scientific, but practising upon dead birds is quite different to watching their habits when alive and killing them at certain stages to find out the effect of certain foods upon them, which I have done scores of times. No doubt I open twenty birds where Professor Hill opens two, but that is not the reason I object to the theory he lays down, it is because I have found out by practical experience that he is wrong. I have many times written upon this subject, and am quite able to prove any statements I have made relating to it. I could give the result of more than twenty pens of fowls I have tried experiments of this kind upon during the last thirty years, were it necessary, and have not only studied the habits of the fowls but also what is good and what is not good for them. The professor goes on to say, "I believe in the early part of 1892 I wrote an article in your valuable journal on this subject, in which I drew attention to the want of direct proof that grit in the gizzard was an absolute necessity to enable that organ to perform its functions correctly, and that in the post mortem examinations of gizzards smooth smooth small pebbles would be found to predominate over rough grit." I thought the professor would know why smooth stones predominate over sharp ones in the gizzard, and he will do well to study this question a little more. One reason for this is because the stones become worn down by being continually swallow-

ed over and over again by the fowls (particularly if they are white or of a light color, as the birds usually pick those up first) on account of there not being a sufficient supply of grit in the ground, or the fowls have not access to it. The less grit the birds are able to pick the smoother the stones are, and the less time they remain in the gizzard. Professor Hill appears to have lost sight of this fact altogether. Again, the article goes on to say, "Unfortunately all creatures brought under domestication are more or less brought under influences conducive of disease, and this is especially so with regard to tuberculosis, &c.," and he then quotes a well known medical authority, who says, "The broadest fact established regarding the exciting cause of tuberculous deposit is that the domesticated animal is more liable to tubercular disease than the same animal in a wild state. The stabled cow, the penned sheep, the tame rabbit, the monkey, the caged, lion, tiger, or elephant, are almost invariably cut off by tuberculous affections, no doubt due to deficient ventilation, and the abeyance of normal exercise of the pulmonary functions." I am convinced that this is so to a great extent. I have not only tried experiments on fowls, but also on many animals during the last twenty-five or thirty years. Science, to a great extent, rules over many things, but practical experience in poultry keeping, at least, must stand before even science. When both go together so much the better. I never write upon a subject before I know a little about it, and am able to prove what I say is correct. Professor Hill in his opening remarks says, "Hereditary predisposition appears to have been lost site of by Mr. Cook, yet the hereditariness of tuberculosis is unquestionable, and, as I have hitherto declared, manifests itself more forcibly after the unnatural practice of breeding in and in." There is not the slightest doubt but what in-breeding in confined runs has a tendency, to bring on tuberculosis in fowls, but not so much as feeding. Take, for instance, Pheasants in their wild state, they in-breed considerably, but they are not subject to tuberculosis anything like so much as when they are kept in confinement and fed upon improper food, and have an insufficient supply of grit. I have proved this by having two lots of Pheasants kept side by side in two separate runs. One lot has been fed on Indian corn, and have no grit except what they may have picked up, and the other lot have been fed upon wheat, barley and French Buckwheat, and have had a liberal supply of grit. In three years' time in the former run there were only three birds left, and twenty out of the twenty-five died of tuberculosis. From the other run there were seventeen birds left at the end of three years, and only two died out of the eight by the disease mentioned. I still have experiments of this kind going on, and in a short time will be able to give the readers of the *Poultry* the results, if necessary. The experiments are not all tried on one soil, but at different places. I also find Indian corn brings on tuberculosis in cattle, many farmers in Lancashire and Cheshire have told me this is so. Butchers have told me they find many of their cattle are touched with tuberculous liver. This is not through in-breeding, and I know it is true, because I have spent a good deal of time in the slaughter houses when the animals have been opened.