

This is a disease caused by the disaggregating action of a minute parasitic fungus called *Tilletia tritici* Birk. The infection of the plantule of wheat takes place at the time of germination through spores that have remained on the envelope of seed grains. The development of the disease can hardly be noticed, but its effects are evident at harvest time. The injured grains resemble a greyish bag ; they are shorter and coarser than normal grains. When one of these bags is opened, one finds the interior filled with a yellowish dust emanating a penetrating and disagreeable odor much like that of rotten fish : whence the name of "herring disease", sometimes given to stinking smut.



STINKING SMUT.—1, diseased head ; 2, spore ; 3 and 4, spores that have germinated and carrying secondary spores at their extremity ; 5, two secondary spores united. Figs 2 to 5, highly magnified. (After Brefeld).

It is equally to be noticed that smutted heads remain strong, erect, not bending like sound heads. Their colour is a somewhat bluish green, of a darker hue than usual, and they retain this colour for a longer time than healthy heads. The threshing of smutted grain infects healthy grain, because smut masses tear and consequently free the germs of the disease. These germs, finding lodgment upon the surface of wheat grain, contaminate the next crop. It is then most important, seeing that one can never say that seed grain is free of these parasites, to destroy smut spores immediately before sowing. The treatment recommended in this case is a formalin bath which is described further on under the heading : Treatment of cereals, (see page 9).