THE FUNGI WHICH CAUSE PLANT DISEASEINTRODUCTIONThe principal non-flowering vegetable parasites which cause plant diseases belong to three divisions: the Slime Molds (Myxo-mycetes); the Bacteria (Schizomycetes); and the True Fungi (Eumycetes including the Phycomycetes). The term fungi, in the broad sense, is often used to include all three of these divisions. All are devoid of chlorophyll and therefore all differ from the green plants in the essential ways which result from this deficiency. Transpiration, respiration, and true assimilation are the same as with the green plants, but photosynthesis or starch manufacture cannot be accomplished by them. Sunlight being thus useless to them directly they can live in the dark as well as the light. Having no ability to elaborate their own foods from inorganic matter these organisms are limited to such nutriment as they can obtain from plants or animals which have elaborated it; that is, they must have organic foods for their sustenance.The fungi have acquired various food habits and adapted themselves to different methods of nutrition. Some are nearly omnivorous and can subsist upon almost any decaying tissue or upon soils or solutions rich with organic debris. Others thrive only upon special substances, as for example, some particular plant or animal, the host, perhaps only upon some particular part of that plant or animal. The organisms tfiat prey upon living things are called parasites. Those living upon dead things are saprophytes. No hard and fast line can be drawn between these two classes. An organism which is usually a saprophyte may live upon a dead member of some plant, gradually encroach upon the still living part and thus become partially a parasite. Again there are times in the history of a plant when life ebbs so low that it is difficult to tell the living from the dead. The pulp of the applewhen ripe, a resting seed, the cells of the potato tuber in winter, are undoubtedly alive, yet their activity is so little that many organisms can gain a foothold upon these stages of the plant that cannot do so at more vigorous periods of their existence.Tubeuf ranks as hemi-parasites those organisms that usually are parasites, but may sometimes become saprophytic, and as hemi-saprophytes such as are usually parasitic, but may exceptionally become saprophytic. These distinctions are of little import, other than to bring out clearly that each species has its own limits as to food requirements.It is hardly to be thought that these parasites and saprophytes have always been dependent organisms. The true fungi for example are best to be regarded as degraded descendants of algse, in which ancestors they once possessed chlorophyll and could prepare their own food from mineral matter by the aid of sunlight.No discussion of the general metabolic processes of the fungi is here necessary further than to indicate that among the products of their activity there are various excretions and secretions, which bear important relations to parasitism. Thus certain fungi growing in artificial culture produce enzymes or organic ferments capable of softening and dissolving cellulose, also toxins, poisons which are capable of killing the cells of the host plant. Such enzymes and toxins are numerous and their bearing upon parasitism is obvious. They enable the parasite to kill adjacent cells of the host and then to effect an entrance through the cell walls to the protoplasm and other nutrients contained within the cell.The presence of the parasite, or secretions produced by it, often calls forth abnormal growth responses from the host. These take very diverse forms, either the undergrowth or overgrowth, hypertrophy, of single cells or tissues, or even the excessive development of large plant parts as in the case of the witches brooms, and the double flowering of the dewberry.The probable relations of the groups under consideration to the other members of the Thallophyta are....

Most plant diseases â€“ around 85 percent â€“ are caused by fungal or fungal-like organisms. However, other serious diseases of food and feed. Collectively, fungi and fungal-like organisms (FLOs) cause more plant diseases than any other group of plant pest with over 8, species shown to cause. Fungi are responsible for approximately two-third of the infectious plant diseases. There are many plant diseases caused by fungi, like mildew. The pulp of the apple 1 2 THE FUNGI WHICH CAUSE PLANT DISEASE when ripe, a resting seed, the cells of the potato tuber in winter, are undoubtedly alive, . List of plant diseases: Infectious plant diseases are caused by bacteria, fungi, or viruses and can range in severity from mild leaf or fruit damage to death. Infectious plant diseases are caused by a pathogenic organism such as a fungus, bacterium, mycoplasma, virus, viroid, nematode, or parasitic flowering plant.

(A) Classical symptoms of panicle blast on rice, although the fungus can cause disease on all foliar tissues. (B) Head blast on wheat. They are a common cause of hay fever allergies. Alternaria fungi overwinter on infected plant parts and debris, or in or on seeds. Control this.