Breakthrough In Marek's Disease Studies Reported By Merck Sharp & Dohme Researchers

throughs in the study of Marek's confirmed.

issue of The Merck Agricultural, and not vice versa Coccidiosis rewarded Memo, published as a service to animal agriculture by Feed Pro ducts, Meick Chemical Division

Marek's disease is essentially a conglomeration of tumorous like disorders of young birds Skin, neives, livei spleen, kidney, heart and muscle are involved Although tumors and associated conditions are comparatively new problems to the broiler industry, they are now the major disease of broiler, as well as replacement birds, breeder or layei operations

Marek research at Merck began several years ago when investigators worked with a broiler from Delmaiva They isolated a strain, now known as MSD-1, which showed only neural and skin lesions

Investigators hoping to isolate the disease-causing agents be lieve that a herpesvirus is closely associated with Maiek's disease A few researchers, including Dr Maag, believe that at least one other virus is involved

According to Dr Maag's article in the Agricultural Memo, Maiek's disease may be at least two disease syndiomes. One is inflammatory, seen as uncomplicated nerve and skin lesions. The sec ond is lymphoproliferative, and is recognized by neoplastic-like lesions of the kidney, liver, sp'een, gonads, muscle and heart Susceptibility appears to be different for each breed, and the method of infection may also differ

Bud-to-bud transmission is probably limited to close con tacts and results mainly from in

Hunter Safety Requirement

The Pennsylvania Game Commassion this week again remindec youths of the hunter safety training requirement for purch asing a hunting license

After September 1 1969 no hunting license shall be issued to any person under the age of sinceen years unless he plesents evidence that he has held a unting license issued by the commonwealth of Pennsylvania on another state in a poor year or a certificate showing that the "outh has satisfactoring complet ed a hunter safety course such as administered by the Pennsylvan a Game Commission

Thousands of youths have al Jeady taken advantage of earlies opportunities to complete the hunter safety requirement Ad cutional youngsters will have tak on the course before the summer ends, so that they will be able to qualify for the 1969-70 nunting license which will be (flective September 1

Injone having questions con coming the provisions of the new aw should consult with a local district game protector

& Dohme Research Laboratories tract. On the other hand, egg. sease. is utilizing two important break- transmission is probable but not Reviewing future methods to (1969) issue of Crops and Soils

ed States poultry producers an se is costly. In addition to econ- some hope, says Dr Maag estimated 200 million dollars a omic losses clearly attributable. The immunological approach,

Research at the Merck Sharp fections through the respiratory does not influence Marck's di-

control Marek's disease, three disease. This disease costs Unit. One thing is certain, the disease routes are possible and warrant

year. These critical break- to Marek's disease, the poultry appears to offer the greatest throughs are the ability to grow producer may suffer secondary possibility of success in the near the herpesvirus associated with losses. For example, Marek's future The genetic approach will Marek's disease in tissue culture disease impairs the birds' probably have limited success, cells, and the development of mechanism for resistance to but should be tried At present, yields the fourth year after ap not as great as those for phossimple serologic tests. Because other disease. Therefore, bilds it is the only method that has lication were almost as high as phorus of these advances, scientists now harboring Marek's disease are proved fruitful. The third ap yields the year the fertilizer was dote A Maag, supervisor of ie- coccidiosis is often associated and cancer with drugs have been effectively search in avian leukosis at Mei- with Maiek's disease But which extremely disappointing. How-

Purdue Agronomist Reports Experiment

Purdue agronomist Stanley A phosphorus at times other than lent amounts. planting and still depend on high

In the August September Magazine. Baiber reports on a sixteen-year experiment at the Puidue Agronomy Faim, where both broadcast and row applications of phosphorus and potassium were studied

In both the low and broadcast

Phosphorus applied by the row mainly as broadcast applications,

increased com yields ten bushely an acre Where phosphorus was broadcast and plowed under, yields were as much as five bush-Barber says that Corn Belt farm, els higher than the best yields ers can apply potassium and from row application of equiva-

Broadcast applications worked well with potassium, also, but the Purdue researchers found potassium less flexible than phosphorus There was greater fixation by the soil and greater removal by the crop A single petassium application was found to be relatively effective for two years. This means that there is still flexibility in the time of application, even though the resiapplications of phosphorus, corn dual effects of potassium are

Many farmers are already ushave the tools necessary for rap- more susceptible to other infec- proach is that of prophylaxis or applied. Thus potassium could ing this system of fertilization id advancement in the control of tions agents, coccidiosis being therapy with drugs So far all be applied on the test soil at any with excellent results, and the disease, reported Dr Theo. foremost This could explain why attempts to attack virus diseases convenient time and still be used though it may not work for all soils. Barber believes it applies Broadcast applications of phost to a large portion of the Corn comes first? Dr Maag believes even, as scientific knowledge in-pholus were more effective in Belt. At the rates of fertilizer Dr Maag has written about that Marek's disease induces the creases, joint efforts of chemists producing high corn yields than used today, he says, phosphorus Maiek's disease in the current occurrence of clinical coccidiosis and biologists may one day be were row applications alone, and potassium can be applied





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