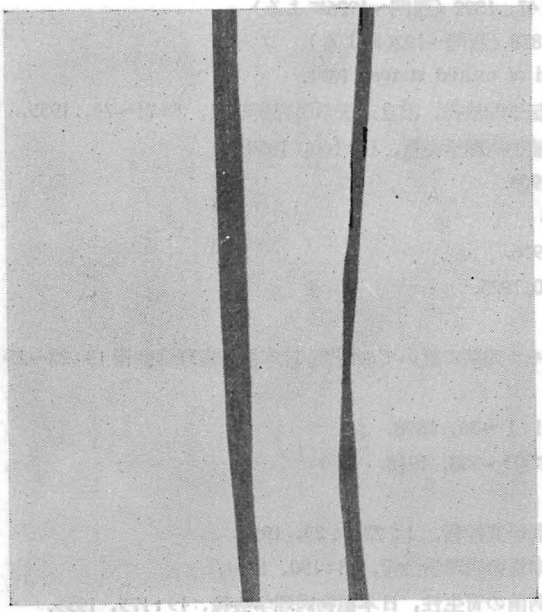
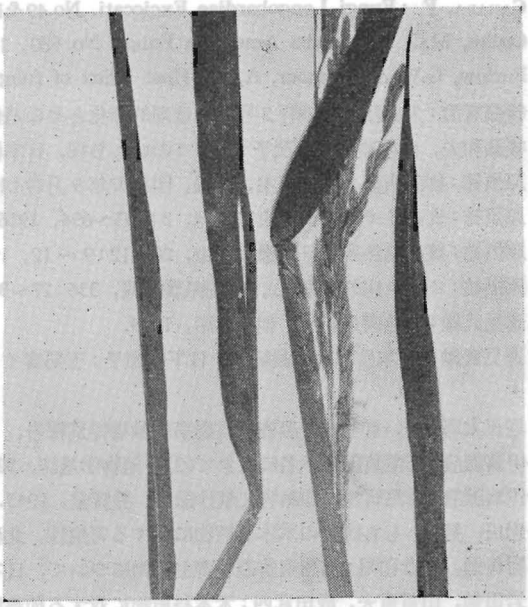
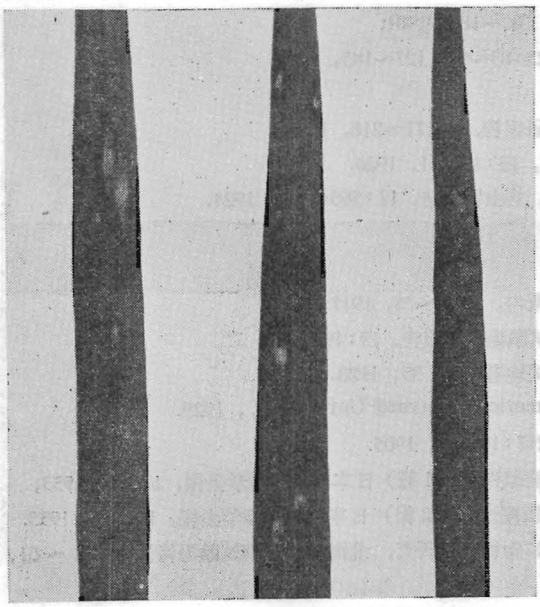
図版説明



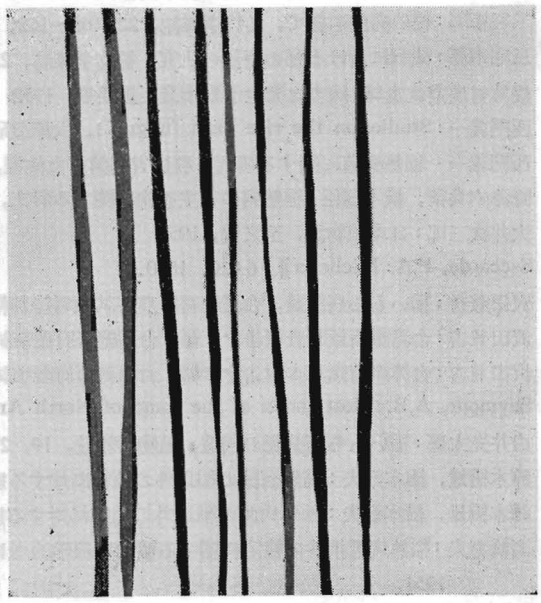
第1図 オニウシノケグサのイモチ病病斑（自然発生）



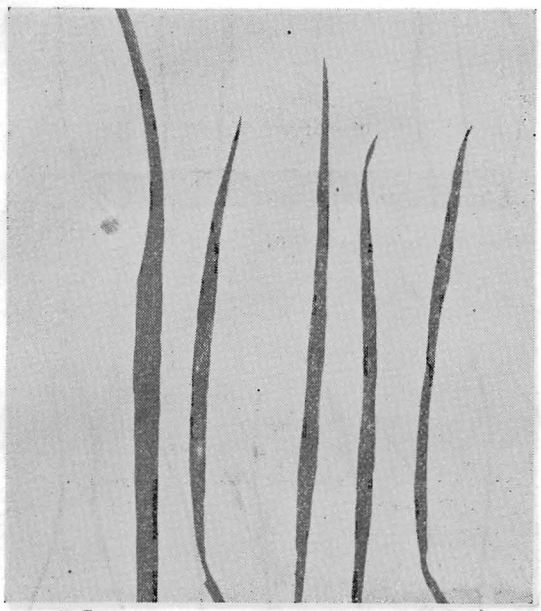
第2図 エゾノサヤヌカグサのイモチ病病斑（自然発生）



第3図 イネのイモチ病病斑（自然発生）

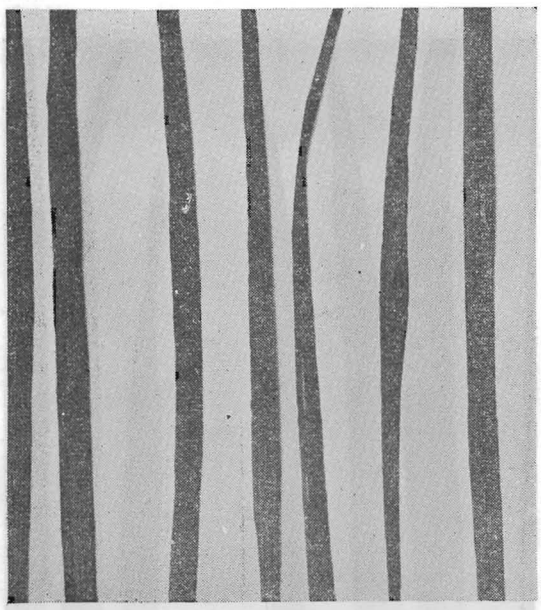


第4図 オオスズメノテツポウのイモチ病病斑（接種感染）

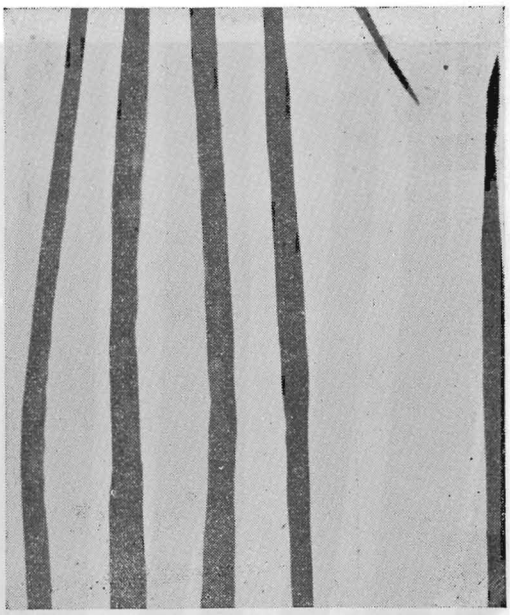


第5図 ハルガヤのイモチ病病斑（接種感染）

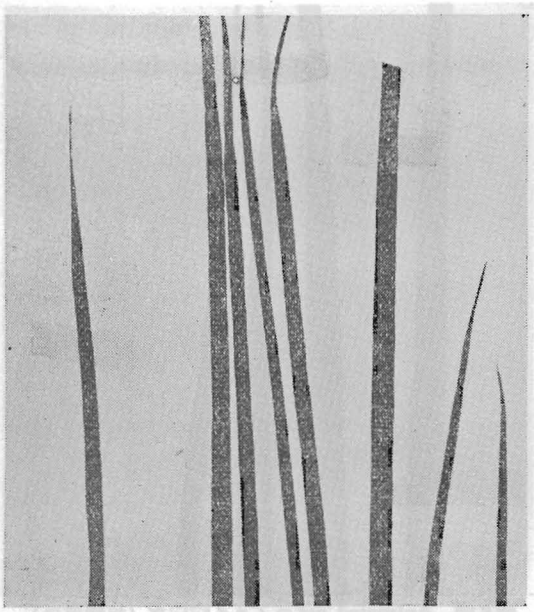
第6図 Animated oatのイモチ病病斑（接種感染）



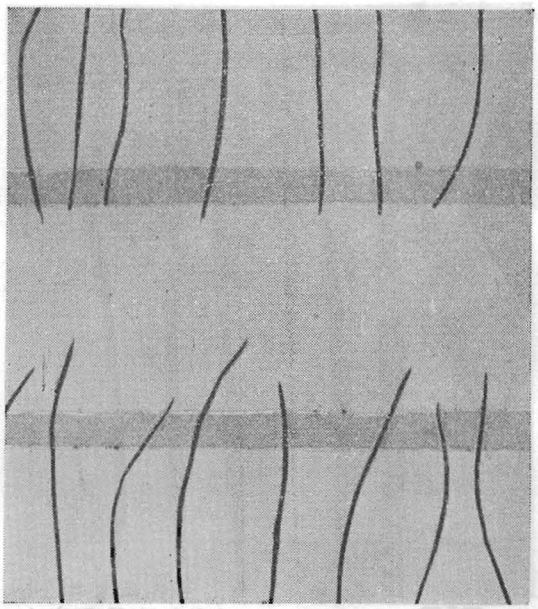
第7図 イヌムギのイモチ病病斑（接種感染）



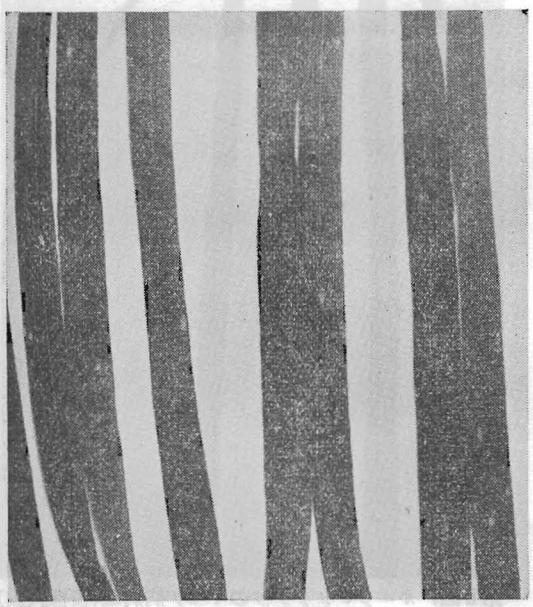
第8図 オニウシノケグサのイモチ病病斑(接種試験)



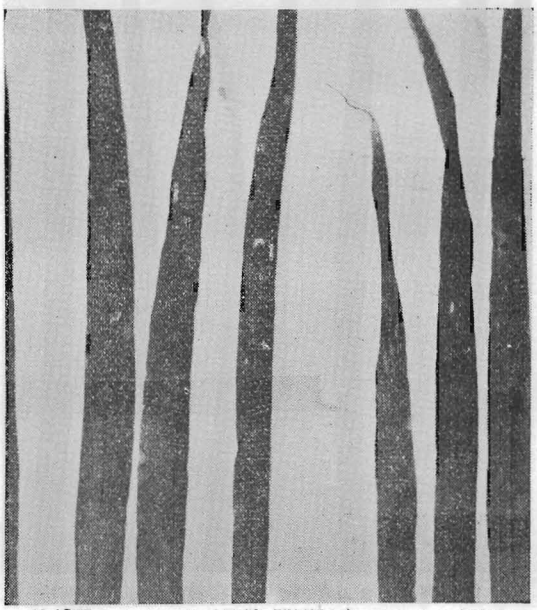
第9図 ヒロハノウシノケグサのイモチ病病斑(接種感染)



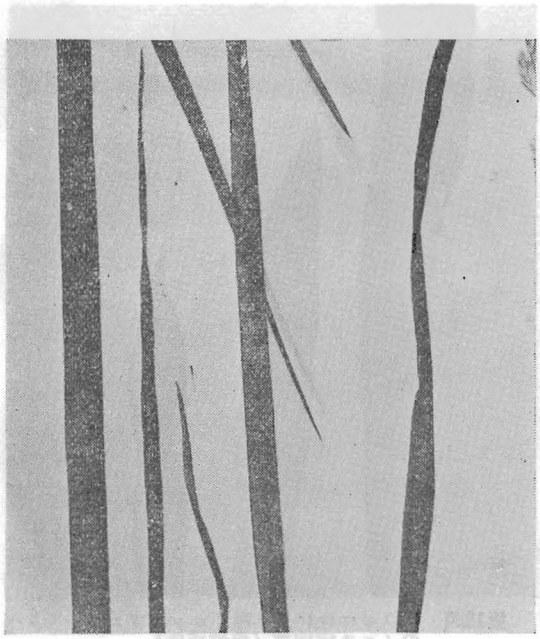
第10図 オオウシノケグサ(Red fescue)のイモチ病病斑(接種感染)



第11図 シラゲガヤのイモチ病病斑(接種感染)

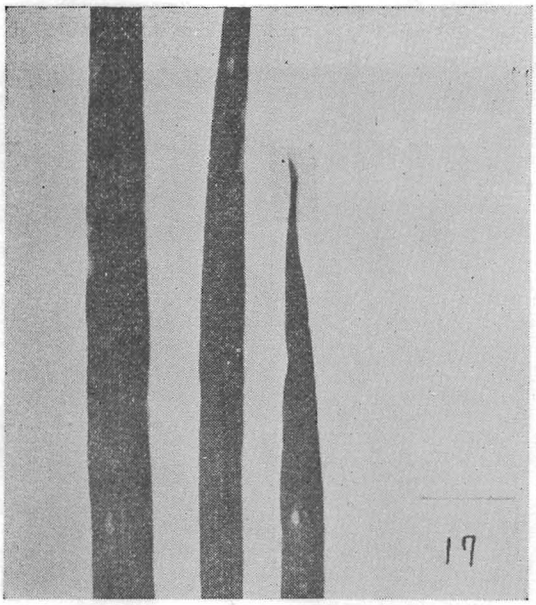


第12図 オオムギ(品種「勝関」)のイモチ病病斑(接種感染)

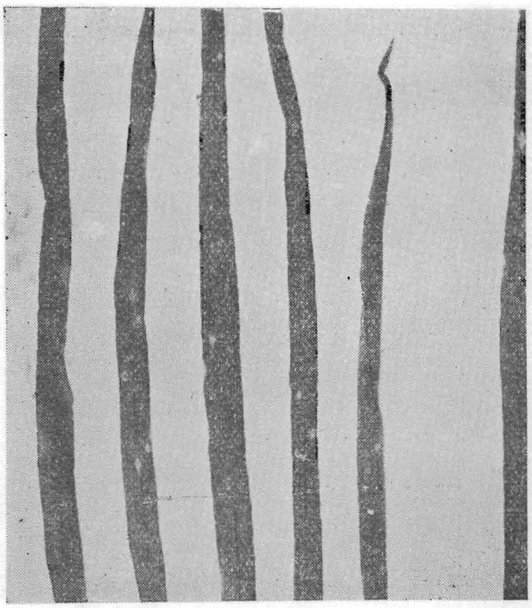


第13図　ネズミムギのイモチ病病斑（接種感染）

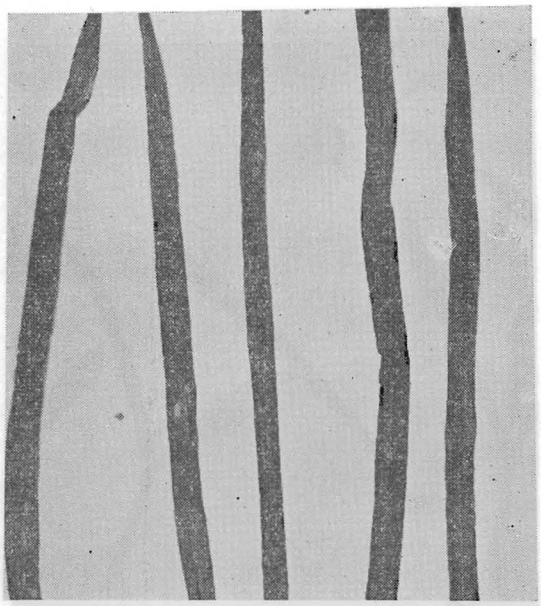
第14図　キビのイモチ病病斑（接種感染）



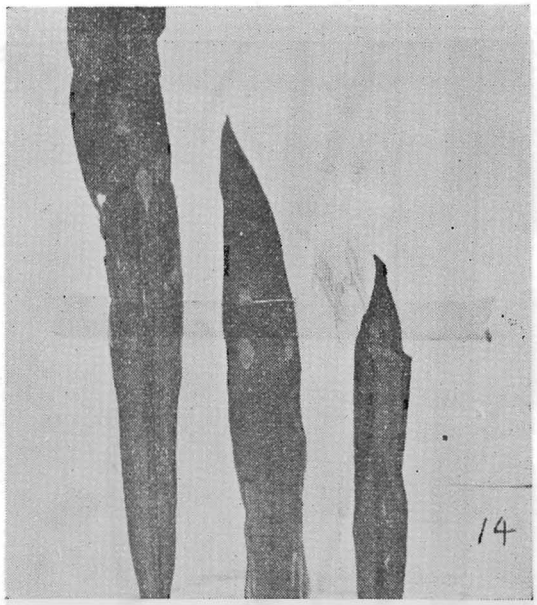
第15図　クサヨシのイモチ病病斑（接種感染）



第16図　オオアワガエリのイモチ病病斑（接種感染）



第17図 ライムギ（品種「ペトクーザ」）のイモチ病病斑 （接種感染）



第18図 トウモロコシ（品種「ロングフエロー」）のイモチ病病斑（接種感染）

Résumé

Studies on the host range of *Piricularia Oryzae* Cav., Report .1

1) For the first time in Hokkaido the present authors announce finding that the wild grasses, *Festuca arundinacea* and *Leersia oryzoides*, grown in or near the rice fields were infected by *Piricularia Oryzae* Cav., the causal fungus of the blast disease of rice plants.

2) Furthermore, it was ascertained that the various below-mentioned gramineous plants cultured in pots were infected by *P. Oryzae*, when they were placed among the rice plants affected severely by the blast disease in an experimental field. These are *Bromus catharticus*, *B. sitchensis*, *Festuca arundinacea*, *F. elatior*, *Holcus lanatus*, *Hordeum sativum* var. *hexastichon*, *Lolium multiflorum*, *Phalaris arundinacea*, *P. canariensis*, *Phleum pratense*, *Secale cereale* and *Zea Mays*. Among them, *Festuca arundinacea*, *Hordeum sativum* var. *hexastichon* and *Zea Mays* has been previously reported as host plants of the rice blast fungus ; the other 10 species of grasses were found to be new hosts of *P. Oryzae*.

3) In the inoculation experiments with *P. Oryzae* to various kinds of grasses including 27 genera and 42 species of Gramineae, it was ascertained that the fungus is able to infect the plants belonging to 28 species of 23 genera. Amongst them are : *Agropyron repens*, *Avena sativa*, *A. tenuis*, *Anthoxanthum odoratum*, *Avena sativa*, *A. byzantina*, *A. sterilis*. *Bromus catharticus*, *B. sitchensis*, *Dactylis glomerata*, *Festuca altaica*, *F. arundinacea*, *F. elatior*, *F. ovina*, *F. rubra*, *Glyceria Leptolepis*, *Hierochloe odorata*, *Holcus lanatus*, *Hordeum sativum* var. *distichon*, *H. sativum* var. *hexastichon*, *H. sativum* var. *nudum*, *Leersia oryzoides*, *Lolium italicum*, *L. multiflorum*, *L. perenne*, *Panicum miliaceum*, *Phalaris arundinacea*, *P. canariensis*, *Poa annua*, *P. trirvialis Secale cereale*, *Setaria italica*, *Triticum aestivum*, *Zea Mays* and *Zizania latifolia*.

4) These results obtained in the present experiments present evidence suggested materially that *P. Oryzae* is able to infect far more numerous kinds of gramineous plants than has been previously believed. It has been known to infect only 6 kinds of gramineous crops, viz., *Oryza sativa*, *Hordeum sativum* var. *hexastichon*, *H. sativum* var. *nudum*, *Seteria italica*, *Triticum aestivum* and *Zea Mays*.

5) When various kinds of the gramineous host plants were inoculated with *P. Oryzae* taken from effected rice plants, the fungus produced conidia which were different in size according to the difference of host plants. However, the conidia formed on various host plants and varying in size having been back-inoculated to rice plants the result was that the fungus produced conidia of almost the same size.

6) According to the differences in variety, in strain and also in environmental conditions under which the plants were grown, the plant belonging to the same species often showed different reactions to the attack of the rice blast fungus, *P. Oryzae*. On the other hand, the same plant freguently showed different reactions to the attack of different isolates of the same fungus.