A Test on the Virulence of 12 Isolates of Bacterial Leaf Blight(BLB) Pathogen Collected from 12 Different Locations in Korea and Philippines.

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Objective: To compare the virulence of pathogens from various parts of Korean paddy fields and two representative isolates from the Philippines.

Materials and Methods:

Twelve isolates of *Xanthomonas oryzae* stock cultures consisting of 10 Korean and two Philippine isolates were inoculated into 2-week-old seedlings of five varieties grown in 5-inch pots. Inoculum size of 5×10^8 cells/ml for each isolate was inoculated by applying ordinary scissors clipping method. Plant reactions were taken 3, 7 and 14 days after inoculation.

Results:

Twelve isolates could be classified into four virulence groups according to the reactions of five varieties. Most of the Korean isolates showed less virulence when they were compared with Philippine isolate Pxo 25 which is known as the most virulent isolate in the Philippines. Six Korean isolates-Kxo 3, 4, 7, 8, 9 and 10- have shown the same levels of virulence as Pxo 25 on most of the varieties except on Wase Aikoku which showed resistant reaction to all of the Korean isolates. One of the Philippine isolate, Pxo 10, however, showed the least virulent among the isolates tested.

Table 1. Plant reactions to 12 isolates of *Xanthomonas oryzae* when plants were inoculated with $5x10^8$ cells/ml at 2-week old seedlings by ordinary scissors clipping method.

Isolate	Reaction* on rice varieties of					Group
	IR22	TNI	W. Aikoku	IR790	IR667	
Kxo 1	1	3	2	2	2	II
2	1	3	2	2	2	II
3	3	5	2	6	6	III
4	3	5	2	5	6	III
5	0	1	1	2	2	I
6	0	1	1	2	2	I
7	2	5	2	6	6	III
8	2	5	3	5	6	III
9	3	5	2	6	6	III
10	3	5	2	5	6	III
Pxo 10	0	1	1	2	2	I
Pxo 25	3	6	5	5	6	IV
Check	0	0	0	0	0	

*Reactions observed 2 weeks after inoculation.
0: no disease, 1-2: resistant, 3: intermediate, 4-5: susceptible 6: plant killed by infection.