

## THE RUSSIAN WHEAT APHID BECOMES ESTABLISHED IN IDAHO

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Russian wheat aphids (RWA) were first detected in Idaho in June, 1987. By August, 1988, they had been reported from every wheat producing area in the State except Boundary County in the extreme north.

Surveys taken in the fall of 1987 indicated that RWA had become well-established in Southwestern Idaho. Most fields of volunteer grain in Canyon County were 0 (undetectable) to 2% infested in late August. By mid September fields averaged 5% infested. Newly emerged winter wheat was 2.8% infested the first week of November. In a subsequent survey on 18-19 November, the same fields averaged 17.6% infested, indicating a great potential for increase even under cool fall conditions.

In Eastern Idaho in 1987 some people had planted winter wheat in the spring as a cover crop on CRP land. These plantings became heavily infested with RWA. The aphids destroyed the cover crop and moved into newly planted winter wheat. Extension Specialist Larry Sandvol estimates that approximately 8,000 acres of winter wheat were plowed due to infestations of RWA which had overwintered in these cover crops.

Russian wheat aphids were easy to find in some fields throughout the winter, and the overwintered adult apterae began to reproduce in mid-March, 1988. Mortality in the early spring was high. RWA became very difficult to find in March and April. We know of only one field in Canyon County which required treatment in the early spring. Spring populations showed up as randomly infested plants rather than patchy or border infestations. There was no evidence of holocyclic overwintering in Idaho this year.

Numbers of RWA increased dramatically in May and June in Southwestern Idaho. The Parma suction trap collection of 7,312 during the week of 15 July represents the most of any species ever collected in a single week in any of our traps. We had very little economic damage on winter wheat, but some spring wheat and barley in Canyon County had to be sprayed. Late-planted barley was particularly vulnerable. Fields which became infested after heading generally did not require treatment; however, we noticed that RWA will feed on the kernels. We wonder if a heavy population could reduce kernel weight or size. In 1987, our 17 Idaho suction traps collected 29 Russian wheat aphids. In 1988, the same traps collected over 17,000. This year populations of other cereal aphids were very low. We believe this occurred because the early spring allowed natural enemies to build up.

Suction traps at 21 locations in Idaho proved to be a particularly valuable tool in monitoring flight activity of RWA. In both 1987 and 1988, RWA showed up first in traps in the mildest areas. As the season progressed collections were made at higher elevations. The flight peaks in 1988 illustrate this trend (Fig. 1). We think the pattern reflects phenological influences rather than migration. Initial trap collections of RWA in 1987 and 1988 usually coincided with the presence of detectable field populations in spring-sown grain crops.



Fig. 1 RWA Collected in Idaho Suction Traps - 1988

