

Seed density of *Z. japonica* on the tideflats of Willapa Bay.

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Introduction: Japanese eelgrass has become a major pest issue for shellfish growers in Willapa Bay. The greatest impacts are on hardshell clam production. An IPM program to manage eelgrass on shellfish beds is being developed. Key to that IPM program is knowledge about the reproductive capacity of *Z. japonica*. A small survey was conducted in 2013 to assess seed production potential.

Methods: Japanese eelgrass was sampled for density of immature seeds on leaves prior to maturity and seed shedding. Four cores (5" diameter clam gun) were collected per site (0.0127 m²/ site) across four sites spread over a 3000 meter section of tideflats at the ~0.3-0.5 m tidal elevation) 5000 m north of Nahcotta, WA. The samples were screened to remove sand. The number of seeds attached to each reproductive shoot was counted.

Results and Discussion: The mean density of immature *Z. japonica* seed \pm standard error was 33,858 \pm 7,183/m². This is equivalent to 3,161 seeds/ft² or 13,772,670 per acre. Although not recorded, the number of seeds on each reproductive shoot was ~10 to 20, with an average ~ 14. The number of these immature seeds that would mature and be viable is difficult to access. Once these seeds are shed, accurate numeration is impossible. Even if only 10% of these immature are viable, that still represents a substantial threat for re-infestation. Because of this re-infestation threat, removal of *Z. japonica* from a small area surrounded by large areas of *Z. japonica* will only result in very short-term suppression. Control of larger tracts of shellfish beds would help slow the speed of re-infestation due to the limited movement of seeds post-shedding.