

“Species Selection for SAV Planting”

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When planting SAV in freshwater through mesohaline tidal waters, there are usually several species that could grow under local conditions, sometimes 12 species or more. Polyhaline and oceanic temperate zone waters may only support two or three common SAV species, but there is still some species diversity. From the list of possible species for the area to be planted, there are often propagules available for more than one species, so which species to plant has to be decided. The pros and cons of the two extreme approaches to species selection will be compared, with suggestions on when to use each approach. The two approaches are: (1) “Best species” – Plant only the species with the highest success and longest persistence in past planting projects in that area; and (2) “Bet-hedging” – Plant most or all of the species that should be able to grow in that area for which propagules are available. In general, “Best species” should improve success where there are results from recent multi-year pilot planting projects at the same site with similar weather conditions, which show that one or two species had the highest survival for the longest time. This would maximize the number of units planted of these successful species, with the risk that they may no longer be the best species if conditions change. “Bet-hedging” is most useful where there are no pilot project data or limited data, little or no water quality data, unpredictable weather conditions, and/or known factors that may make SAV survival difficult, such as low water clarity or sub-optimal sediments, grazing pressure, or exposure conditions. The results of recent SAV planting projects in Chesapeake Bay tidal waters that used more than one species at the same site will be briefly reviewed.