Various mulching materials (rice hull, pine sawdust, pearlite) were compared to produce sprout vegetables using the root of beach silvertop (*Glehnia littoralis* Fr. Schm. ex Miq.). The growth survey was confirmed by the yield of sprout vegetables harvested monthly from April to September after planting in March. The inorganic components (total N, P, K, Ca, Mg, Na, Fe) and the indicator compounds (bargapten, imperatorin, scopoletin) containing the leaves and stems were analyzed.

The root weight of *Glehnia littoralis*, 3‒4 years old, was 9.42 ± 1.10 g; root diameter was 8.73 ± 0.49 mm, and root length was 19.84 ± 0.91 cm. The highest yield in April was recorded by pine sawdust (1,235.38 g/3.3 m²) followed by rice hull and pearlite, recording (1,185.85 g/3.3 m²) and (59.82 g/3.3 m²) respectively. In May, rice hull gave the highest yield (895.53 g/3.3 m²) followed by pine sawdust (712.00 g/3.3 m²) and pearlite (711.51 g/3.3 m²) the least. Yields decreased in all treatments as temperature increased during harvest. The total yield after 5 months was the most effective in the rice hull. Before planting, mineral contents of roots of *Glehnia littoralis* were distributed in order of K > Na > P > Ca > Mg > Fe, especially potassium and sodium contents were high. When comparing the mineral content of leaves and stems by mulching materials, rice hull and pine sawdust treatments were K > P > Na > Ca > Mg > Fe, and pearlite treatments were K > P > Na > Ca > Mg > Fe. On the other hand, all three indicator compounds of *Glehnia littoralis* contain pearlite, rice hull and pine sawdust in order. Among the mulching materials, pine sawdust had a pine scent soaked into the sprout vegetables, and pearlite caused a small wound on the stem surface. As a result, rice hull is suitable as a mulching material for stable production of *Glehnia littoralis* sprout vegetables, and it must be cultivated to avoid high temperatures.