Title Asexual reproduction of *Amorphophallus bulbifer* by low-cost artificial-induction technique

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Abstract

This paper proposes the 'on and off' theory of a reversible balance between flowers and leaves, underlying the phenomenon of flower induction in plants. While the genes that are responsible for opening of leaf buds are 'on', those responsible for opening of flower buds are 'off' and vice versa. Taking advantage of this fact a technique has been devised whereby flowers and subsequently seeds can be produced on demand. This technique has been successfully applied to the induction of *Amorphophallus bulbifer* flowers on a large scale. This procedure has changed konjac traditional breeding methods, which were using small size tubers or root (stem) that were planted into the ground. With the possibility of triggering seed production whenever required, the amount of seeds exceed the amount of tubers and the reproduction rate is significantly increased. Furthermore, the seedlings generated from seed show higher resistance against excessive temperatures, water stress and soil borne diseases, such as soft rot disease (*Erwinia carotovara* subsp.) and *Sclerotium rolfsii* Sacc.