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Box hedge alternatives: Key findings after 8 years of experiment in the southn-west of France

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Introduction

Controlling the box tree moth and box blight can be challenging for green spaces managers. It needs to monitor the development of these parasites and to combine several control techniques, a money and time-consuming strategy for an uncertain efficiency. In this context, owners of some historic and remarkable gardens wanted to replace their box bed by other shrubs. In order to find taxas that offer the same characteristics - hardiness, slow growth, green and dense hedges all year long – boxwood alternative taxas were studied by Astredhor Sud-Ouest in the project SaveBuxus since 2014.

Methods

A first phase of tests (2014-2018) and a preliminary survey to assess the needs of the potential users (2018) enabled to elaborate a list of the taxas to evaluate. On this basis, a second phase of tests has been launched in 2019 as follows:

- 21 taxas studied (fig. 2)
- Plantation in the Spring of 2019
- Experimental design (fig. 1): a triangle planting pattern, 2 replicates per taxa
- Crop management: plantation in open ground, sprinkling for the start, trimming when needed
- Monitored parameters: height, diameter, mortality, row volume, crop health
- Aesthetic assessment by professional gardeners and plant growers jury

Conclusion

Finding a species that can present all the advantages of the boxwood seems an impossible task. Nevertheless, some of them can be an interesting solution if the local conditions are compatible with the needs of the taxa and managers are willing to spend more time to manage their hedges.

Fig 3 (a) *Lonicera nitida* 'Scoop', (b) *Pittosporum tenuifolium* 'Midget' and (c) *Hebe pinguifolia* 'Sutherlandii' hedges in Spring 2021



Results

- After 2 years of plantation, it was possible to define a ranking of the different taxas regarding their interest to replace boxwood beds (fig 2). Within this experimentation, *Lonicera nitida* 'Scoop', *Pittosporum tenuifolium* 'Midget' and *Hebe pinguifolia* 'Sutherlandii' seems the most promising taxas (fig 3).
- The exposure and the microlocal soil conditions influence greatly on how the different taxas develop.
- Regardless of the species, all these shrubs need more trimming than the boxwood when used in beds.



Fig 1 Experimental field at Astredhor Sud-Ouest



Fig 2 Taxas ranking regarding their interest to replace boxwood in beds