

This chart is taken from an article on the Royal Flora Holland website. The article can be found via [this link](#).

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## ORNAMENTAL PLANT SECTOR MORE SUSTAINABLE

In 2016, Royal Flora Holland (RFH) asked the independent research agency Blonk Consultancy to compare the environmental impact of single-use plant trays to those of multi-use plant trays. As of yet, the report in question has never been made public. Nonetheless, a summary of information is available on the websites of both Blonk and RFH. On the basis of this information, it is abundantly clear that the multiple-use tray yields a significant environmental advantage over the single-use plastic tray.

This document serves as an explanation of the graph on the right, which can also be found on the website of RFH. The Blonk report compares the disposable tray (Normpack 306) with the multi-use tray (Floratino 746) on a number of environmental criteria. Plastic leakage into the environment was not a criterion, but if that had been the case, the multi-use tray would still perform better.

## PURPOSE OF THIS EXPLANATION

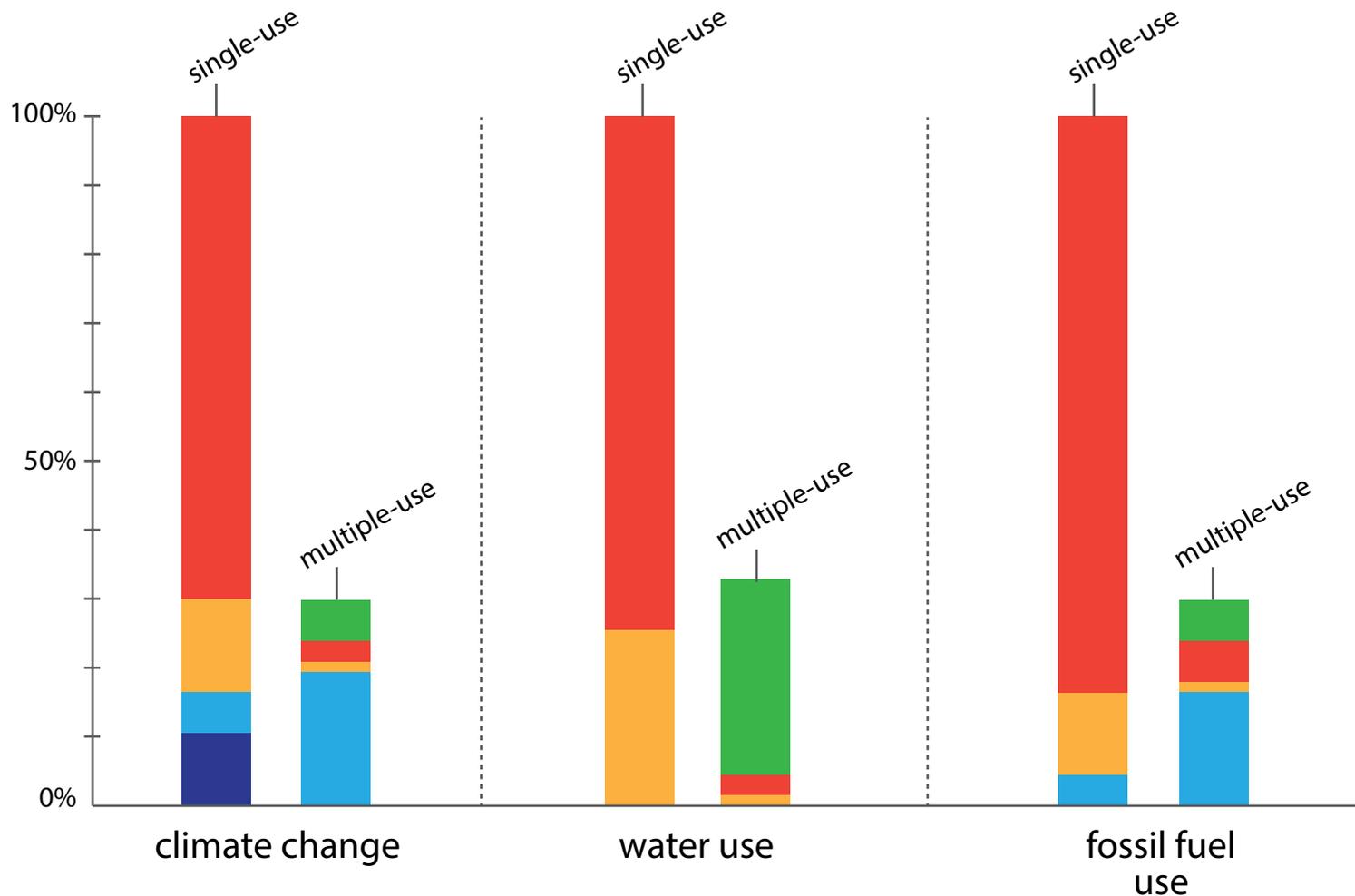
With this project, the Plastic Soup Foundation aims to motivate the ornamental sector to bid farewell to the single-use plant tray. The risk of plastic leakage from disposable plastic items into the environment is large due to the enormous volume of production and the low value of the waste material. The single-use plant tray is no exception, even if the design were to be adjusted.

## MOTIVE

It is startling that, despite the findings of the report, RFH continues to endorse single-use plastic trays. RFH has a unique position as a potential influence for the switch to multi-use trays; this potential is going untapped. RFH continues to see a solution in improving the recycling of single-use trays. It is unrealistic to believe that the level of recycling will reach more than 50%. For closed-loop recycling, all old materials would need to be collected -- even those from export countries. Products from as close as Germany may be extremely difficult to recollect.

## IMPACT CATEGORIES

The graphic below is an elaboration of the existing RFH graph, which shows the environmental categories of the single-use/multi-use comparison more clearly. The structure is as follows: 0% represents the lowest possible impact, and 100% the highest. The specific categories are substantiated on the following pages. The differences would be even larger if “the risk of plastic leakage to the environment” were included as a category.



## PROCESSES

- cleaning
- production material
- production tray
- transport
- waste management

## KEY PRINCIPLES

### GENERAL

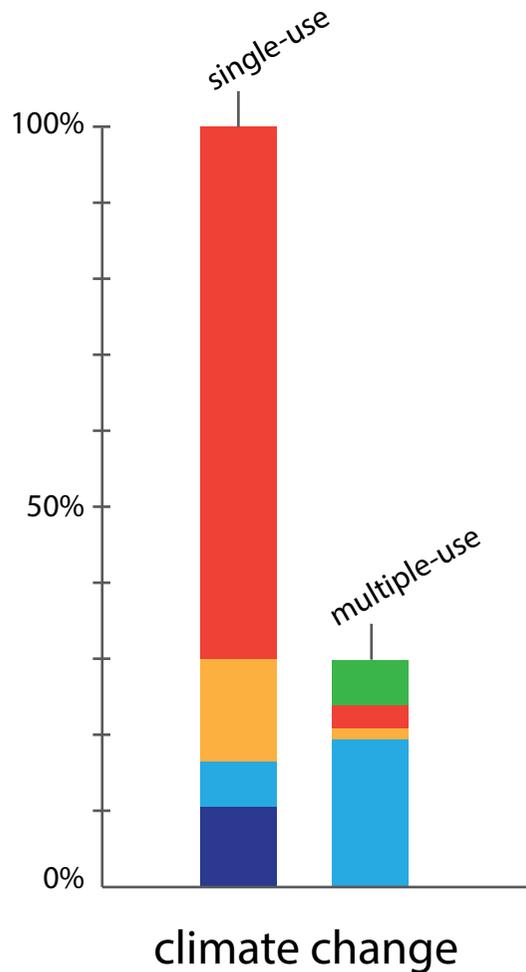
Transport distance:  
Netherlands-Berlin  
(±700 Km)

### SINGLE USE

- 90% recycled material
- 50% recycling after use

### MULTIPLE USE

- 70 circulations per tray
- incl. cleaning



CATEGORY:  
**CLIMATE CHANGE**

In this category, it is evident that with single-use plastic trays, the MATERIAL PRODUCTION process has a large negative impact on the climate. The recycling of the collected material into new trays is included in this process.

Despite the fact that the TRANSPORT and CLEANING of multi-use trays are more clearly counted than with single-use trays, an environmental gain of 70% would be achieved when switching to multi-use trays in the CLIMATE CHANGE category.

PROCESSES

- cleaning
- production material
- production tray
- transport
- waste management

KEY PRINCIPLES

GENERAL

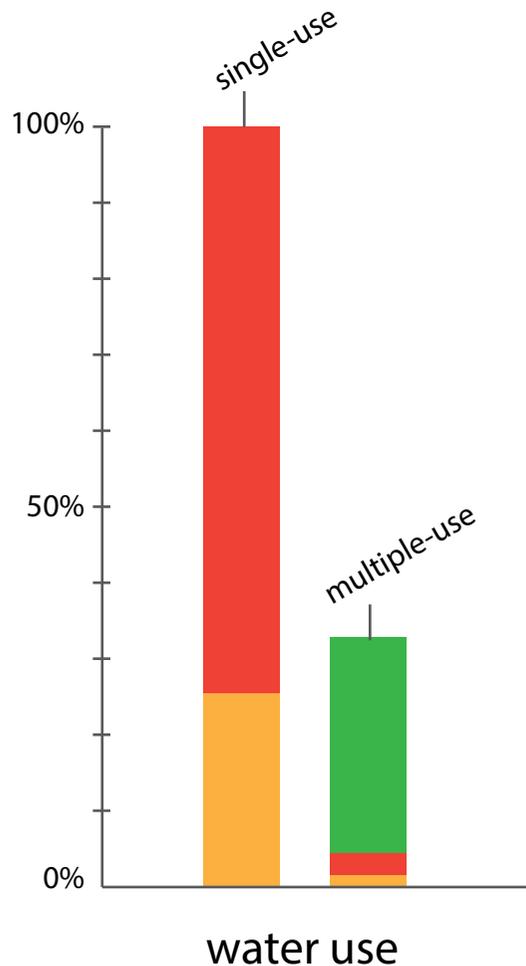
Transport distance:  
Netherlands-Berlin  
(±700 Km)

SINGLE USE

- 90% recycled material
- 50% recycling after use

MULTIPLE USE

- 70 circulations per tray
- incl. cleaning



CATEGORY:  
**WATER USE**

It can be clearly seen in this category that MATERIAL PRODUCTION also has a larger influence on the WATER USE category for single-use trays. N.b, the recycling process requires a lot of water to clean waste plastic.

The TRAY PRODUCTION process for single-use trays has approximately the same influence as the CLEANING of multi-use trays.

The values for MATERIAL PRODUCTION and TRAY PRODUCTION are much lower for multi-use trays because the trays are rotated and the production number is therefore lower.

When switching to multi-use trays, an environmental gain of about 70% would also be obtained here.

PROCESSES

- cleaning
- production material
- production tray
- transport
- waste management

KEY PRINCIPLES

**GENERAL**

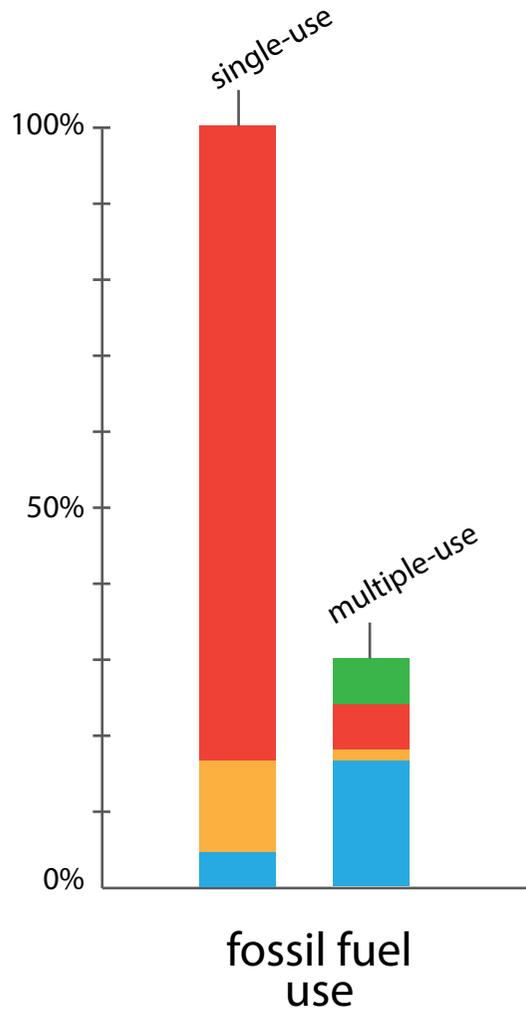
Transport distance:  
Netherlands-Berlin  
(±700 Km)

**SINGLE USE**

- 90% recycled material
- 50% recycling after use

**MULTIPLE USE**

- 70 circulations per tray
- incl. cleaning



CATEGORY:  
**FOSSIL FUEL USE**

Again, in this category, it is evident that MATERIAL PRODUCTION is heavily represented for single-use trays. Large quantities of raw fossil materials and fuels are required for the initial production as well as for the recycling of the single-use plastic tray.

The TRANSPORT process for multi-use trays has a large value because the trays are heavier and are also more likely to be returned.

When switching to multi-use trays, an environmental gain in the category of FOSSIL FUEL USE of 70% would also be achieved because new trays would not have to be produced continuously.

**PROCESSES**

- cleaning
- production material
- production tray
- transport
- waste management

**KEY PRINCIPLES**

**GENERAL**

Transport distance:  
Netherlands-Berlin  
(±700 Km)

**SINGLE USE**

- 90% recycled material
- 50% recycling after use

**MULTIPLE USE**

- 70 circulations per tray
- incl. cleaning

## SUMMARY

- the three impact categories discussed each give reusable trays 70% of environmental benefits over single-use trays
- the environmental benefits would be shown to be even greater if plastic leakage had been included as a criterion
- higher recycling value for single-use trays is highly dependent on the percentage of returned trays and reimbursement. Because 90% of the single-use trays are exported, a high percentage of return is unlikely to be achieved
- In the current situation, the loss of leakage caused by disposable trays can hardly be prevented
- the many phases of transportation and transshipment of the recollected trays mean that a higher risk of plastic leakage into the environment exists.

## CONCLUSION

The unreleased report undoubtedly indicates a very large environmental gain from the implementation of multiple-use plastic trays over single-use plastic trays. Had the criterion of “plastic leakage into the environment” been included, the discrepancy between the two categories would have been even greater -- still in favor of the multi-use trays. This supports the introduction of deposit-based multi-use plastic trays in the ornamental plant sector

The sector should take the initiative to come to a European standard based on return systems so that a level playing field can be created for every interested party to operate in a sustainable manner.

Such a plan would be in line with the European Commission’s latest plans.

**We ask all retailers and vendors of potted plants to stop using single-use plastic trays!**



Single-use Normpack trays found along a provincial road. *PlasticSoupFoundation©2018*