**SAVING WATER WITH *SPHAGNUM* PEAT IN NURSERY GROWING MEDIA**

|  |  |
| --- | --- |
| **DOI:** | [10.17660/ActaHortic.2004.664.11](https://doi.org/10.17660/ActaHortic.2004.664.11) |

|  |  |
| --- | --- |
| **Authors:** | J. Caron, R. Beeson, J. Haydu, J. Boudreau |
| **Keywords:** | growing media, Sphagnum peat, sedge peat, irrigation, *Viburnum, Ligustrum*, easily available water, water desorption curve |
| **DOI:** | [10.17660/ActaHortic.2004.664.11](https://doi.org/10.17660/ActaHortic.2004.664.11) |
| **Abstract:** There is a need to improve irrigation efficiency in nursery production. Too coarse substrates with low available water require frequent watering and adding fines in proper amount may improve irrigation efficiency, at the conditions their addition does not result in low air filled porosity. An experiment was carried out to increase the proportion of fines (peat in peat/bark/sand mixes) from 30 to 60% on a volume basis or change peat type from sedge peat to *Sphagnum* peat to improve water use efficiency. *Ligustrum* and *Viburnum* plants were grown to marketable size and the water and labour needed were recorded. As a result of this accelerated growth, the amount of irrigation water needed to achieve marketable size was reduced by 15% for *Viburnum* and 22% for *Ligustrum* from changing peat type from sedge to *Sphagnum*. Savings in water increased to 38% and 26%, respectively if more sphagnum peat was added to the mix. These notable water savings were obtained solely by altering the quantities and/or type of peat, not by changing production-related factors. These advantages resulted from improved aeration and drainage properties and increases in plant available water. This research also found that investing more in a substrate initially by incorporating *Sphagnum* peat resulted in considerable increases in profits. | |