

Know your tap water

Bill Maddams and Ivan Le Page

Is rainwater better than tap water for our plants? If so, where is the evidence? Here the authors have amassed comprehensive data from around the country (UK) and present their results and some preliminary conclusions.

Introduction

Many of the introductory books on growing cacti and other succulents that have appeared during the past half century have suggested that the use of rainwater is preferable, without giving any supporting evidence. More recently, there has been a lively exchange of opinion on the rainwater versus tap water debate on the BCSS Forum. Here again the outcome proved inconclusive. What is lacking is clear scientific evidence on the composition, in terms of contaminants, of both types of water. Such information should prove very useful if not decisive.

Clearly, the initial approach to the problem is to collect information on the composition of tap water as this is available from the various companies that provide supplies covering the UK. This article reports the compilation of such information and considers its implications.

Results

Much of the discussion on the BCSS Forum centred around the pH value and the calcium carbonate content of tap water. Hence, information on these has been given top priority. Additionally, there has been occasional reference to the presence of nitrogen compounds and chlorine, and as these are also determined as part of the comprehensive water regulatory requirements they have been added to the survey.

In order to present the substantial amount of information obtained in a clear way it has been subdivided into three groups. There are two tables for England, covering soft and hard water, and one for Scotland and Wales. For some areas extensive results for a number of sites have been supplied, which show little variance. In these cases, high and low values are given to show the range of variation.

| TABLE 1 – ENGLAND – HARD WATER | | | | |
|--------------------------------|---------------|-----|---------------|----------------|
| | CALCIUM (ppm) | pH | NITRATE (ppm) | CHLORINE (ppm) |
| Coventry | 76 | 7.5 | 22 | 0.3 |
| Malvern | 76 | 7.6 | 19 | 0.3 |
| Stamford | 105 | – | – | – |
| Banstead, Surrey | 140 | 7.5 | – | 0.2 |
| Lincoln | 177 | – | – | – |
| Amersham | 136 | 7.1 | – | 0.2 |
| Kettering | 105 | 7.4 | 16 | 0.2 |
| Guernsey north | 50 | 7.2 | 25 | 0.3 |
| ESSEX and SUFFOLK WATER | | | | |
| Maldon | 39 | 7.7 | 28 | 0.9 |
| Southend east | 46 | 7.6 | 26 | 0.8 |
| Basildon | 55 | 7.6 | 22 | 0.9 |
| Romford west | 60 | 7.9 | 23 | 0.9 |
| Barkingside | 67 | 7.9 | 23 | 0.9 |
| Silver End | 86 | 7.6 | 6 | 0.9 |