

A Current Overview of Water in Australia[®]

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INTRODUCTION

Australia is the driest inhabited continent in the world with water consumption increasing dramatically as high population growth and the increased needs of irrigators continue to impact on the demand for a share of a scarce resource. This paper attempts to briefly outline the current situation in regard to supply and demand across all sectors of the community and links with a subsequent paper regarding pending inevitable changes to legislation that will impact on Australian nurseries.

THE FACTS

Only 3% of the Earth's water is fresh, the remaining 97% is saline. Of all the continents, Australia's rivers carry far less water than those of Africa, Europe, Asia, and North and South America. Only 12% of the annual rainfall in Australia runs off, the remaining 88% is lost to evaporation and transpiration so we are dealing with a finite resource that is under increasing demand.

In Australia we use our water in the following way (Fitzpatrick, 2000).

Activity	Usage (%)
Agriculture	70
Households	8
Water services	8
Electricity and gas	6
Manufacturing	3
Mining	3
Other	2

Water can be diverted from agriculture without major losses to production via changes to higher value uses and the efficient transfer to and use of, water on farms. Water needs to be given the status of a high value resource to ensure that it is protected by high quality infrastructure and is used as efficiently as possible. The establishment of tradeable water rights and the evolution of markets to transfer those rights will increase productivity and encourage more efficient usage.

The government of New South Wales has recently announced that it will enact laws to introduce water licenses in perpetuity; current legislation requires the renewal of licenses every 15 years. This is an historic move and it is hoped will be followed by the other States enabling farmers and nurseries to plan, borrow, and invest with confidence in irrigated agriculture and at the same time reinforce the value of water as stated above.

The nursery industry, in general, is a highly efficient user of water in relation to the value of goods produced per megalitre. There are, however, many operators that fall well below the line due mainly to the inefficiency of their irrigation systems and the lack of infrastructure that allows for the recycling of runoff water.

The industry associations via the Nursery Industry Accreditation Scheme Australia, the untiring work carried out by our Industry Development Officers and the highly successful Waterworks training program, continue to raise awareness of the urgent need to improve and adopt water use standards. If we are not seen to be proactive in this area and to have improved our water use efficiency, then we can expect to be excluded from participation in any future dialogue that may take place regarding the implementation of further regulations.

LITERATURE CITED

Fitzpatrick, E.N. 2000. Water and the Australian economy. The Australian Academy of Technological Sciences and Engineering, Symposium 2000.

Water in Australia: A Nursery Industry Perspective®

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INTRODUCTION

Fresh, useable water is one of Australia's, New Zealand's, and in fact the world's most precious resources. This is a given. Water is crucial in nursery production and it is a resource that we as an industry need to be aware of and conserve. We need to be "water wise", but how do we do this without sacrificing plant quality and productivity?

AUSTRALIAN AND NEW ZEALAND WEATHER

Australia and New Zealand have many similarities. Many of the plant species sold in the nursery industry are the same. In some areas the climates are similar but not very many. The following table shows the major climatic figures that affect plant growth for the major population centers in New Zealand and Australia and how they compare.

Table 1 shows dramatically the ratio of rainfall to evaporation and the fact that typically evaporation relative to rainfall is higher in Australia than it is in New Zealand.

WHY SHOULD WE BE CONCERNED ABOUT WATER (ANYWAY) IN AUSTRALIA?

Australia is well known as one of the driest continents. In Victoria, where I live, we are in our 7th year of below average rainfall, and the last couple of years have seen above average summer temperatures. The cost of water is increasing in Australia, moving towards real values, but not very quickly for that used in agriculture. There is an increased demand for water both in the number of people using it and how much each person is using. This in turn leads to less water getting back into storages because of increased numbers of dams and other stored water.

Other factors, including that governments have moved away from capital investment in water storage, means that water restrictions are being enforced and becoming inhibitive for many growers. Water trading is becoming a significant issue — particularly in tough economic times.

Typically though, in Australia, we waste water in Agriculture. Less than 50% of the water used in agriculture gets to the target crop due to losses in evaporation, leakage, open channels, leaking drains, and poorly designed infrastructure.