Spanish experience in desalination for agriculture

Domingo Zarzo*, Elena Campos, Patricia Terrero

R&D Department, Valoriza Agua, Molina de Segura, 8, 30007 Murcia, Spain
Email: dzarzo@gruposyv.com

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ABSTRACT

Desalination in Spain has a long story. From the early 60s many installations for drinking water supply were built, mainly in the Canary Islands. Soon it was assumed that other users would need water supply at competitive prices. Agriculture was one of them. The leap from the islands to mainland was in the 90s, when there was a substantial water shortage. In this decade, more than 200 installations were built for this application, mainly treating brackish water. More recently, the installation of large capacity plants from Spanish government programme “AGUA” would mean the end of small plants for agriculture although a discussion about the price for desalinated water arose between the government and the agricultural users. In this paper, we will describe the Spanish experience in desalination for agriculture from an historic point of view. We will also discuss the economic aspects such as the price of water obtained from desalination plants compared with other sources such as superficial or reused water as well as the percentage of water costs in agriculture production and other beneficial aspects such as increased production. With the experience gained for more than 17 years and 60 different size installations built, this paper will be illustrated with some examples where farmers have built their own desalination plants. Another interesting aspect will be to show how to do the planning for an irrigation system for agriculture based on desalination.

Keywords: Agriculture; Desalination; Irrigation

*Corresponding author.

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