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Italian study on agricultural irrigation practices highlights major potential for step-change

Overhaul of agricultural water supply could save EUR 17 billion in Italy alone according to recent study sponsored by Borealis together with a group of leading companies

Investments and innovation as well as improved water management policies in agriculture could yield savings of up to EUR 17 billion over a 30 year period in Italy alone, a recent study shows. The study, entitled "Water management policies in agriculture" was carried out by Althesys Strategic Consultants. Findings were presented recently at a conference held in Rome, Italy which brought together high-ranking stakeholders triggering important discussions and resulting in a commitment to cooperate on an action plan to work towards the study's recommendations.

The research was developed through the analysis of practices in four critical areas: irrigation methods (drip irrigation and micro irrigation versus standard sprinkler systems), management models (information services for farmers), new technologies (automated delivery systems) and the water intake and distribution grids (replacement of open-air irrigation channels with conduits and repairing the existing ones).

Startling conclusions and recommendations for improvements

Using a set of 'best practices' for irrigation methods, water intake and distribution grids, automated delivery systems and information services for farmers, study author Professor Alessandro Marangoni, an economist and expert in the energy and environment sectors, arrived at some startling conclusions.

For example, the use of drip irrigation and/or micro-aspersion in place of the current aspersion technique could achieve a net benefit of up to EUR 4.3 billion over the next three decades. Within the agricultural water supply grid, substitution of furrow irrigation with open channels would already yield estimated benefits of between EUR 4 and 8.1 billion. Furrow irrigation is widespread in farming across southern Europe as well as throughout Asia, but leads to substantial water loss through evaporation and infiltration. On a

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more local level, replacement of sprinklers by drip systems and micro-spray systems could achieve savings between EUR 2.9 and 4.3 billion.

Borealis supports study as part of its Water for the World™ initiative

Borealis, a leading provider of chemical and innovative plastic solutions, supported the study as part of its Water for the World initiative. Established in 2007, this corporate social responsibility (CSR) programme aims to address the global water challenge encompassing social, environmental and business initiatives such as water access projects, awareness raising and the promotion of best practices.

"Food security and water efficiency are closely linked. There is an urgent need for the establishment of new water management policies due to the growing scarcity of water resources and the risks it presents for food security," says Cino Serrao, Borealis Business Development Manager. "That is why we have supported this important study as part of our Water for the World engagement and why we intend to act on its findings."

The study was sponsored and carried out in cooperation with Acquedotto Pugliese, ANBI, Borealis, Federutility, Irritec & Siplast, Nestlè, Ritmo and SAB. Its findings are backed by the agricultural committee of the Italian Chamber of Deputies, the region of Lombardia, the farmer associations of Asaja and Coldiretti as well as the consumer organisation, Movimento difesa del Cittadino. The study is available in both English and Italian.

Growing scarcity of global water resources require urgent need to take action

"Water for the World's core areas of engagement are to create awareness, promote best practices and to foster knowledge for sustainable water use," Cino Serrao adds. "Addressing the need to improve agriculture water use was a logical step for us, following the pioneering work we have already done on the assessment of efficiency improvements for urban infrastructures in Italy and the analysis on the water footprint of plastics."

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Prof. Marangoni's study was presented in Rome in participation with the Presidents of the Agricultural Committees of the European and Italian parliaments and the Italian Ministry of Agriculture.

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About Borealis and Borouge

Borealis is a leading provider of chemical and innovative plastics solutions that create value for society. With sales of EUR 6.3 billion in 2010, customers in over 120 countries, and 5,100 employees worldwide, Borealis is owned 64% by the International Petroleum Investment Company (IPIC) of Abu Dhabi and 36% by OMV, the leading energy group in the European growth belt. Borealis is headquartered in Vienna, Austria, and has production locations, innovation centres and customer service centres across Europe and the Americas.

Through Borouge, a joint venture between Borealis and the Abu Dhabi National Oil Company (ADNOC), one of the world's major oil and gas companies, the company's footprint reaches out to the Middle East, Asia Pacific, the Indian sub-continent and Africa. Established in 1998, Borouge employs approximately 1,600 people, has customers in more than 50 countries and its headquarters are in Abu Dhabi in the UAE and Singapore.

Building on Borealis' unique Borstar® technology and their experience in polyolefins of more than 50 years, Borealis and Borouge provide innovative, value creating plastics solutions for the infrastructure (pipe systems and power and communication cables), automotive and advanced packaging markets. In addition, Borealis offers a wide range of base chemicals from melamine and fertilizer to phenol and acetone.

Today, Borealis and Borouge have a manufacturing capacity of over 5.4 million tonnes of polyolefins (polyethylene and polypropylene) per year of which 26% are the result of a recently completed capacity expansion in Abu Dhabi. An additional 2.5 million tonnes per year is scheduled for completion by mid-2014, creating the world's largest integrated polyolefins plant. The companies continue to invest to ensure that their customers throughout the value chain, around the world, can always rely on superior products and security of supply.

Borouge and Borealis are committed to the principles of Responsible Care® and proactively contribute to addressing the world's water and sanitation challenges through their Water for the World™ initiative.

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