OMAN GREEN AWARDS 2011

NOMINATION FORM

Instructions for completing the nomination form:

1. Please use a separate Nomination Form for each award category.
2. You may attach extra paper as necessary
3. In the event you attach photographs, Statistical Tables and Reports to support your nomination they should be clearly labeled and marked
4. Please note that it is mandatory to provide two independent referees for the Nomination to be considered.

Organization Details:

Organization Name	Directorate General of Agricultural & Livestock Research
CR No.	
Organization Type (Business/NGO/Gov)	Gov
Website	www.moa.gov.om
Location /Address	Muscat, P. O. Box 50 P. Code 121 Seeb

Award Category Research

Project Details:

Project Title Utilization of Treated Wastewater in Agriculture Production

Location of Project Saham

One Line Description of Project _The focus of the project was exploration of non-conventional water resource for agriculture development and enhancement of productivity and in turn to reduce the pressure on groundwater resources. In addition to that, it is a unique feat to experiment and to facilitate favorable economic and social impact.

Effectiveness

What were your goals?

To take advantage of the quantities of treated wastewater and areas for cultivation and production of seasonal forage crops

To evaluate forage crops for winter and summer (sorghum, maize, and barley).

To study the impact of tertiary treated wastewater on the soil at the targeted sites.

To evaluate the project on techno-economic parameters for future planning and utilization of treated wastewater to also study possibility of commercial application possibilities of the project.

How have you measured your success? ____This was though experimental we decided a perfect plan to cultivate crops for two years and noted observations. Work out input output cast and developed economic analysis model for testing commercial viability of the pilot project. Results were fantastic and project was very successful. Sorghum crop was most profitable. thus wastewater utilization for cultivation of fodder crops was very successful say we rate our self as 100%.two years constant observation and data collection was an uphill task attended most successfully.

Innovation & Creativity

How were innovative methods, strategies or ideas applied? __Instead of one crops we selected 3 crops for observations. variation for two season for crops was observed. This provided good canvas for observations and working out average yield and cost to estimate cost benefit analysis. Season-crops rotation-economic model on actual cost basis was very innovative method to estimate results more accurately. All records of yield –sales-input cost etc.. were worked out for each crop and for each season. Thus six economic models were developed, two for each crop and then aggregate level results are work out which has long lasting validity and can be used as sustainable cultivation of crops with treated wastewater. _____

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Impact

How has the project/initiative/work motivated others to contribute to a greener Oman

Due to most encouraging results now the experiment has rich application possibility. Regional municipality will provide treated wastewater and farmers in the area shown keen interest to cultivate such crops. Degraded farms due to drought or salinity will be rehabilitees at Batinah and other regions. Under food security for fodder is very important. This will have very favorable, socioeconomic impact. Due to green fodder environmental impact will be better and downstream projects on livestock will benefit for further growth.

Originality and Leadership

How has the nominee demonstrated vision, foresight and persistence? According to information provided by Oman Wastewater Services Company (OWSC), there are 11 wastewater treatment plants of the company in Muscat with average production to about 41,800 and 42,750 and 94,740 m3/day during the years 2008, 2009 and 2010, respectively. The forecast for the period 2011-2016 is expected to increase output of treated wastewater by an increase in demand by the Muscat Municipality as a result of which the estimated average quantity of surplus water would be between the 17,943 m^3/day in 2011 and 21,993 m^3/day in 2016. However, there are 48 wastewater treatment plants in other governorates of the Sultanate supervised by the Ministry of Regional Municipalities & Water Resources. Moreover, figures from the Ministry of Regional Municipalities and Water Resources show that the total capacity of the current number of stations (48 stations) was expected to be 38,010 m^3/day whereas the average amount of water as treated effluent from 48 stations was estimated to be only 8,665 m^3/day taking advantage of municipal needs and landscaping as 4,204 m^3/day which accounts for 48.5% of the average amount of treated wastewater. Hence, there is a need to conserve water resources and explore new possibilities for reusing treated wastewater for irrigation.

Continuity & Sustainability

How sustainable is the initiative carried out?

Explain how it will be effective in the long term

The cultivation of fodder by using treated wastewater utilization is likely to have favorable environmental impact due to green land development. The economics and social impact is also likely to be most favorable due to better yield and better economic returns as per economic analysis. May be some government support would be essential to promote such cultivation and supply of treated wastewater. On view of "food security" which is top on the agenda, promotion of such project utilizing the treated wastewater for increasing fodder supply is of paramount importance on national level for long term plans.