Application Form

2008-09 TWRI Mills Scholarship Program

1	Name of Student and TAMU Student ID Number
Name:	Yujin Wen
2	Contact Information for the Student (Address, E-mail, Phone number)
3	Name and Contact Information (Address, Email, Phone number) for Faculty Advisor or Committee Chair
Name:	Dr. Giovanni Piccinni and Dr. Tom Cothren. Committee Chairs
Post Address:	1619 Garner Field Road, Uvalde, TX, 78801-6205
E-mail:	G-PICCINNI@TAMU.EDU
Tel:	(830) 278-9151
4	Description of the student's proposed research, emphasizing how it will address a water resources-related concern (particularly how, if possible, it will benefit Texas).

Water demand is increasing in South Texas due to the population increase. As the water resources are limited in this area, making a good plan for urban / agricultural water use is crucial. Regulated deficit irrigation (RDI) can be one of the measures to save water without affecting the crop yield.

According to the previous-years limited irrigation research at Uvalde, we can save at least 25% of the water used in irrigation while keeping the same yield. This year we propose the RDI experiment to find the threshold, i.e. the maximum amount of water we can save from irrigation (keeping the same yield), and build a curve or model to illustrate the relationship between irrigation amount and crop yield. Beside five 'fixed' ratio regimes (e.g. 'fixed 75%' means always irrigate 0.75 inch when the water loss is 1 inch), we decide to try two 'dynamic' ratio regimes, which suppose to have a better water use than fixed ratio regime. For example, the 'dynamic 75%' means the deficit irrigation ratio may vary in different growth stages which is optimized according to the crop demand, while the total ratio of 75% is kept. We chose 70% and 50% to operate both fixed and dynamic irrigation. Their water use efficiency data are going to be collected in selected growth stages for comparison purpose as well. An irrigation-yield relationship curve or equation can be derived from the collected data as the objective of this study. This result is expected to be very helpful for the decision making on water issues as it may save more water for urban consumption and other purposes.

5	Academic Qualifications of the Student, including undergraduate and graduate GPR, GRE scores, courses taken and grades. A transcript is not required; rather a simple listing of relative courses is adequate.

6	Proposed use of funds resulting from this Scholarship (for example, to pay tuition, conduct research, etc.). There are no matching requirements for TWRI Mills Scholarships.
1) Pay part of the tuitions of the online courses “sustainable irrigation management” (offered by other institution) and some other related distance learning modules that are normally not offered at TAMU; 2) Purchase reference books and professional softwares; 3) Pay the registration fee of the conferences that related to water management and irrigation.	
7	Intended career path the student anticipates pursuing.
I would like to pursue an academic career in a research institute or university, focusing on water use/ water supply of agriculture as well as Water resources management.	