

# A REAL TIME ASSESSMENT SYSTEM FOR SPRING WHEAT PRODUCTION IN SIBERIA.

## Hydrology and Remote Sensing Laboratory, ANRI

Dr. Paul Doraiswamy developed practical, innovative procedures to solve a problem encountered by the Production Estimates and Crop Condition Assessment Division (PECAD) of the Foreign Agricultural Service (FAS). PECAD is mandated to operationally assess foreign crop production of strategic and economic importance to global grain trading. Their analysts have had considerable difficulty during the past two decades assessing spring wheat yields for portions of southern Siberia. Kazakhstan in particular, contributes significant quantities of grain to global markets, and thus, information on spring wheat yield from this region is vital to U.S. and global grain market security. Dr. Doraiswamy led a successful research program that evaluated, and adapted an ARS spring wheat growth model to the southern Siberia region by linking satellite-based retrieval of crop physiological parameters with the spring wheat model. Dr. Doraiswamy and PECAD analysts worked as a team to develop an operational system for regional crop production assessment. PECAD analysts are now using Dr. Doraiswamy's system to forecast spring wheat yields for the entire spring wheat belt of southern Siberia with confidence. The technologies developed by Dr. Doraiswamy provide a foundation for more timely, thorough and accurate global wheat production monitoring. Accurate global wheat production assessment and prediction provides significant economic and humanitarian benefits: U. S. agriculture will be more competitive in the global market place by reduced vulnerability to surprises of global and domestic market prices. Given insights to foreign production, U.S. farmers will be able to make more informed decisions on farm resources management. Strategic decision makers will be able to better assess the amount of food aid needed for areas affected by crop failures, and more effective response of Famine Early Warning programs is now possible.

**Primary Contact:** Paul C. Doraiswamy, Meteorologist, USDA-ARS Hydrology and Remote Sensing Laboratory, ANRI, Bldg. 007, Rm. 104, BARC-W, Beltsville, MD 20705

**Phone:** 301-504-6576 **Fax:** 301-504-8931 **E-mail:** pdoraisw@hydrolab.arsusda.gov

	<i>FLC Representative Making Nomination</i>	<i>Nominee(s) Supervisor</i>	<i>Program Manager</i>	<i>Lab Director</i>
<b>Name:</b>	Harry D. Danforth	Walter J. Rawls	Richard J. Brenner	Phyllis E. Johnson
<b>Address:</b>	Bldg. 003, Rm. 208 10300 Baltimore Ave.	Bldg. 007, Rm. 104, 10300 Baltimore Ave.	5601 Sunnyside Avenue Rm. 4-1159	Bldg. 003, Rm. 223 10300 Baltimore Ave.
<b>City:</b>	Beltsville	Beltsville	Beltsville	Beltsville
<b>State/Zip:</b>	MD 20705-2350	MD 20705-2350	MD 20705-5131	MD 20705-2350
<b>Phone:</b>	301-504-6421	301-504-8745	301-504-6905	301-504-6078
<b>Fax:</b>	301-504-6001	301-504-8931	301-504-5060	301-504-5863
<b>E-mail</b>	Danforthh@ba.ars.usda. gov	wrawls@hydrolab.arsusd a.gov	<a href="mailto:Richard.Brenner@nps.ars.usda.gov">Richard.Brenner@nps. ars.usda.gov</a>	Johnsonp@ba.ars.usda. gov