Notices

Federal Register
Vol. 67, No. 83
Tuesday, April 30, 2002

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Agricultural Research Service

Notice of Availability of a New Partially Validated Simulation Model of the Cotton Crop

AGENCY: Agricultural Research Service, USDA.

ACTION: Notice of availability and intent.

SUMMARY: Over the last 30 years, the U.S. Department of Agriculture's (USDA) Agricultural Research Service (ARS) has conducted a wide range of research on cotton which is an agriculturally important crop in the U.S. Part of this effort involved the development of research models which subsequently evolved into a series of ''production models'' designed to serve as decision aids to cotton producers. In 1996, ARS decided to develop a new ''second generation'' Cotton Production Model (CPM) that would retain the best features of the earlier versions in a new, more versatile, and more user friendly framework. This process was completed to the stage of beta-testing by 1999, when the need to redirect limited resources to other priorities caused ARS to decide not to complete the validation process. The model is now being released for further development. ARS believes that CPM, while only partially validated, has the potential to make useful contributions to American cotton producers when completed. For these reasons, ARS decided to make the model's source codes available for further development and commercialization to any researcher or company interested in cotton production, precision agriculture, or related technologies.

DATES: The CPM is available as of February 7, 2002.

FOR FURTHER INFORMATION CONTACT: Technology Transfer Point of Contact: Dr. Richard J. Brenner, USDA–ARS, Office of Technology Transfer, George Washington Carver Center, 5601 Sunnyside Avenue, Beltsville, Maryland 20705–5131, Tel.: 301 504–6905, e-mail: *Richard.Brenner@nps.ars.usda.gov.*

Validation Technical Point of Contact: Dr. Gretchen Sassenrath-Cole USDA–ARS, Application and Production Research Unit, PO Box 36, Stoneville, Mississippi, Tel.: 662–686–5289, e-mail: *gsassenrath@ars.usda.gov.*

Technical Point of Contact: Dr. V. R. Reddy, Plant Physiologist/Research Leader, Alternate Crops and Systems Lab., Bldg 007, Rm 116, BARC–W, 10300 Baltimore Avenue, Beltsville, Maryland 20705, Tel.: 301–504–5806, e-mail: *vreddy@asrr.arsusda.gov.*

SUPPLEMENTARY INFORMATION: A new process-based cotton model, CPM, has been developed to simulate the growth and development of upland cotton (Gossypium hirsutum L.) throughout the growing season with minimal data input. CPM predicts final cotton yield for any combination of soil, weather, cultivar, and sequence of management actions. The executable code, source code, and supporting documentation for the model are available on the webpage of the Office of Technology Transfer, USDA–ARS *(http://ott.ars.usda.gov/).* The personal computer system requirements to run CPM are minimal, requiring IBM-compatability, Windows 95+, 64K RAM, and 4Mb hard disk space.

The model draws upon the latest scientific knowledge available, and is intended to be used with a wide variety of cotton types across the entire U.S. Cotton Belt. CPM is written in C++ using a new modular structure that allows flexibility and adaptability. This object-oriented structure should allow modules to be incorporated into process-based models of other crop species (see Acock, B. and V. R. Reddy. 1977. Designing an object-oriented structure for crop models. Ecological Modeling 94: 33–44). In addition to being modular and generic, CPM has other advantages over earlier models. Compared to previous cotton models, CPM is more robust, more user-friendly, more easily maintained, and more easily updated with future advances in science. The algorithms that simulate crop growth are derived in part from the best of each of the previous models, and they incorporate new physiological information as well. A new feature of CPM is that it incorporates 2DSOIL, an excellent up-to-date soil and root process model (see Timlin, D. J., Y. Pachepsky, and B. Acock. 1996. A design for a modular, generic soil simulator to interface with plant models. Agronomy Journal 88:162–169). 2DSOIL tracks water movement through the soil-plant-atmosphere continuum with hourly time-steps. It also incorporates a new model of plant water relations that responds realistically to water stress. CPM has updated treatments of carbon and nitrogen stresses compared to previous models, and it is designed for easy addition of responses to phosphorus and potassium. Because the growth of each leaf, internode and fruit is simulated separately, CPM should be easily linked to pest or disease models.

CPM requires fewer and simpler data inputs from users than do previous models. Required inputs at the start of each run include data on weather, soil, cultivar characteristics, and management actions. No prior knowledge of cotton growth is required and no soil or plant measurements are required during the season. Mid-season correction of simulated plant growth is unnecessary. Weather data are best obtained from a weather station near the field, though use of readily available county weather data produces acceptable results. Soils data from the database of the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS), generally are sufficient to run CPM. These data are maintained and updated by NRCS, and can be accessed if one knows the soil type in which the crop is grown. Data on management actions are entered by the user, and are similar to those of other modern models.

In 1998, CPM underwent limited testing and revision using data from several locations across the U.S. Cotton Belt. In 1999, the evaluation was much more extensive, using data from about 20 locations across the Cotton Belt in a cooperative effort involving ARS scientists, University scientists, and Cooperative Extension Specialists and Agents. The testing utilized the most current cultivars and management practices, including genetically engineered cultivars and ultra-narrow row spacings. Evaluation testing was an independent process from model development and calibration (parameterization). In one test, the

model was calibrated using data obtained in 1997 for the variety DPL 5415 RR in Starkville, Mississippi, on a Marietta soil. Calibration of the model involved determining cultivar-specific values of 11 parameters to provide a best fit between model output and measured crop characteristics (e.g., plant height, number of nodes, stem weight, fruit count, fruit weight). The calibrated model accurately predicted plant growth from the same cultivar grown in Stoneville, Mississippi, on a Bosket loam in 1998. Notably, 1997 was a cool wet year, whereas 1998 was a hot dry year. The model's success in simulating responses to these environmental and soils differences indicates its robustness and utility.

CPM has the potential to be useful as a decision aid for cotton farmers and crop production consultants. If fully developed, it would be a valuable tool to optimize management inputs such as irrigation, fertilization, plant growth regulators, and defoliant application prior to harvest. In its current version, however, CPM has not yet been fully validated to be useful as a decision aid. The released version of CPM should be considered an advanced model suitable for research purposes. ARS does not endorse its use for any other purpose at this time. Of particular importance to a decision aid model is the user interface. The interface under which CPM has been developed and tested is one that was earlier developed for the soybean model, GLYCIM, and has been documented elsewhere (Acock, B., Pachepsky, Y. A., Mironenko, E. V., Whisler, F. D., and Reddy, V. R. 1999. GUICS: A Generic User Interface for On-Farm Crop Simulations. Agronomy Journal. 91:657–665). However, this interface is not part of the current release, and the user will need to develop or adapt one for his or her own needs.

The CPM Development Team was an *ad hoc* group drawn from numerous ARS laboratories across the Cotton Belt. Dr. Basil Acock, ARS, Beltsville, Maryland, led the team that developed CPM to its present stage. Drs. Rick Olson and Yakov Pachepsky were the other central members of the development team. The other team members included, Drs. Eugene Marenenko, Avi Marani, Ron Sequeira, and Hal Lemmon. The CPM Validation Team was led by Dr. Gretchen F. Sassenrath-Cole, ARS, Stoneville, MS, with a very large team of cooperators.

ARS is releasing the source code and documentation of CPM at this time, under the Authority: 35 U.S.C. 207, so that interested parties can continue to develop the model for their own needs and purposes. ARS does not foresee providing monetary or technical support for the efforts of others to refine, adapt, or use this model, and provides no warranty for its use for any purpose. ARS does not reserve any rights or interests in the work that may be performed by others to refine or adapt it. ARS does reserve the right to continue its own refinement of the current version of the model at a later date, should program needs require it.

Michael D. Ruff,

Assistant Administrator.

[FR Doc. 02–10565 Filed 4–29–02; 8:45 am]

BILLING CODE 3410–03–P

DEPARTMENT OF AGRICULTURE

Food Safety and Inspection Service

[Docket No. 02–013N]

Exemption for Retail Store Operations

AGENCY: Food Safety and Inspection Service, USDA.

ACTION: Notice of adjusted dollar limitations.

SUMMARY: The Food Safety and Inspection Service (FSIS) is announcing automatic increases in the dollar limitations on sales of meat and meat food products and poultry products to hotels, restaurants, and similar institutions that do not disqualify a store for exemption from Federal inspection requirements. By action of FSIS' regulations, for calendar year 2002, the dollar limitation for meat and meat food products has increased from $44,900 to $47,000 and for poultry products from $39,800 to $41,600. These increases are based on price changes for these products evidenced by the Consumer Price Index (CPI).

EFFECTIVE DATE: This notice is effective April 30, 2002.

FOR FURTHER INFORMATION CONTACT: For further information contact Daniel Engeljohn, Ph.D., Director, Regulations and Directives Development Staff, Office of Policy, Program Development, and Evaluation, FSIS, U.S. Department of Agriculture, Room 112, Cotton Annex Building, 300 12th Street, SW., Washington, DC 20250–3700; telephone (202) 720–5627, fax (202) 690–0486.

SUPPLEMENTARY INFORMATION:

Background

The Federal Meat Inspection Act (21 U.S.C. 601 *et seq.*) and the Poultry Products Inspection Act (21 U.S.C. 451 *et seq.*) provide that the statutory provisions requiring inspection of the slaughter of livestock or poultry and the preparation or processing of products thereof do not apply to operations of types traditionally and usually conducted at retail stores and restaurants, when conducted at any retail store or restaurant or similar retail-type establishment for sale in normal retail quantities or service to consumers at such establishments (21 U.S.C. 454(c)(2)and 661 (c)(2)). In §§ 303.1(d) and 381.10(d), respectively (9 CFR 303.1(d) and 381.10(d)), FSIS regulations address the conditions under which requirements for inspection do not apply to retail operations.

Under these regulations, sales to hotels, restaurants, and similar institutions disqualify a store for exemption if they exceed either of two maximum limits: 25 percent of the dollar value of total product sales or the calendar year dollar limitation set by the Administrator. The dollar limitation is adjusted automatically during the first quarter of the year if the CPI, published by the Bureau of Labor Statistics, indicates an increase or decrease of more than $500 in the price of the same volume of product for the previous year. FSIS publishes a notice of the adjusted dollar limitations in the **Federal Register**. (See paragraphs (d)(2)(iii)(b) and (d)(2)(vi) of §§ 303.1 and 381.10.)

The CPI for 2001 reveals an average annual price increase for meat and meat food products of 4.6 percent and for poultry products of 4.4 percent. When rounded off to the nearest $100.00, the price increase for meat and meat food products is $2,100.00 and for poultry products is $1,800.00. Because the price of meat and meat food products and the price of poultry products have increased by more than $500, in accordance with §§ 300.1 (d)(2)(iii)(b) and 381.10 (d)(2)(iii)(*b*) of the regulations FSIS has increased the dollar limitation on sales to hotels, restaurants, and similar institutions from $44,900 to $47,000 for meat and meat food products and from $39,800 to $41,000 for poultry products for calendar year 2002.

Additional Public Notification

Public awareness of all segments of rulemaking and policy development is important. Consequently, in an effort to better ensure that minorities, women, and persons with disabilities are aware of this final rule, FSIS will announce and provide copies of this **Federal Register** notice in the *FSIS Constituent Update*. FSIS provides a weekly *FSIS Constituent Update* via fax to over 300 organizations and individuals. In addition, the update is available on line through the FSIS web page located at *http://www.fsis.usda.gov*. The update is