

# AGROMEDICINE PROGRAM UPDATE

MUSC DEPARTMENT OF FAMILY MEDICINE – DIVISION OF PUBLIC HEALTH AND PUBLIC SERVICE  
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Volume 13  
No 12  
December 15, 2001

*Previous issues are available at [www.musc.edu/oem/apunews.html](http://www.musc.edu/oem/apunews.html)*

## Program Notes

### ➤ **Prospects for 2002** by Dr. Stanley Schuman

The opening of the New Year gives us the opportunity to evaluate the past 12 months and anticipate the future. Our program has been blessed to have a leader in clinical academic family medicine, Dr. William M. Simpson, Jr., take over the more strenuous duties of Medical Director from myself. Dr. Simpson is ideally suited to balance his MUSC teaching duties with the public service, research, and educational opportunities offered by the Agromedicine Program. In the past year he has brought new energy and skills to the geriatric aspects of farm families, risk/benefit concerns of nutraceuticals, child safety on the farm, and networking with rural health leaders in our state.

Our 'panel' of 225 Agromedicine Program Consulting Physicians covers all 46 counties in the state and is a model for other agromedicine pro-

grams across the nation. These practitioners receive continuing education on agromedicine through this newsletter. We also enjoy working closely on a continuing basis with alumni of MUSC and USC now practicing throughout the state.

significant threat of unprovoked stings and illness.

Thus, we look forward to 2002 to continue our commitment in providing our agricultural medicine consultative service to the clients of the Cooperative Extension Service, patients, community-based physicians, and to the consumers of agricultural products.

Dr. John W. Kelly, Vice President for Public Service and Agriculture at Clemson University, best expressed the benefit of our Agromedicine Program in a November 28, 2001 letter:

Collaborations such as this benefit not only the cooperating participants but to a greater extent the citizens of our state in that the exchange of ideas and information create a basis for a greater understanding of the complexities of the interaction between medicine and agriculture. It also provides opportunities to explore new and exciting ideas where research and teaching are needed.



Our client-based research in 2001 produced two important publications: (1) heat-susceptibility of the rural population in South Carolina and practical cost-saving preventive measures, and (2) documentation of the fire ant threat to the interior of homes, hospitals, schools, and nursing homes with a

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## Safety of Christmas Plants

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During the holiday season the Agromedicine Program is frequently consulted for information on the health effects from ingesting the berries and leaves from holly, mistletoe, and poinsettia. The following information<sup>1</sup> is reproduced from the December 2000 issue of the *Agromedicine Program Update*. Details on the diagnosis and treatment of poisoning from these plants should be obtained from the Palmetto Poison Control Center (1-800-922-1117).

Holly berries are poisonous. Nausea, episodic vomiting, and diarrhea in some cases characterize toxicity. Treatment is supportive and fluids are recommended to prevent dehydration.



Holly



Mistletoe

Both the leaves and the stem of the American mistletoe are toxic. The berries are also toxic when ingested in large quantities.

Symptoms develop two or more hours after ingestion and include recurrent vomiting, abdominal pain, and diarrhea. Treatment includes fluid and electrolyte replacement. Mistletoe may also cause contact dermatitis.

Ingestion of poinsettia berries, leaves, and flowers may produce vomiting although usually no symptoms develop. Should vomiting occur, fluid replacement is advised. Primary irritant dermatitis is more of a concern with the poinsettia than acute poisoning.



Poinsettia

<sup>1</sup>Lampe KF and McCann MA. *AMA Handbook of Poisonous and Injurious Plants*. Chicago: Chicago Review Press, 1985.

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## Childhood Cancer and Parental Occupation

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There has been a modest increase in childhood malignant cancers in recent years. It is believed that at least part of the increase is a result of better diagnosis and reporting. Nervous system tumors, acute leukemias, and lymphomas are the leading malignancies in children under age 15 years. The causes of these cancers remain unknown; however, ionizing radiation, some drugs, and genetic predisposition have been established as risk factors. Parental employment has

also been examined as a risk factor for childhood cancers.

A study<sup>2</sup> that analyzed data from the Swedish Family-Cancer Database has provided additional information to the question of the relationship between parental occupation and childhood cancers. The database included a total of 8,158 cases diagnosed before age 15 years from 1958 - 1996. Standardized incidence ratios were calculated for the 52 occupations identified for the mothers and fathers of the children. Major findings of the study included the following items:

- "An excess of brain cancers was found among the offspring of male postal workers, male administrators and managers, and female cooks."
- "An increase in leukemias was seen in the children of male technical, chemical, physical, and biological workers (professional occupations with university degrees) and of female assistant nurses."
- "An increase in lymphomas was found in the offspring of seamen, male shoe and leather workers, and male packers, loaders, and warehouse workers."

No excess cancers were reported for the offspring of farmers and foresters in Sweden.

<sup>2</sup>Mutanen P and Hemminki K. *Childhood cancer and parental occupation in the Swedish family-cancer database*. *J Occup Environ Med* 2001; 43: 952-958.