Dictionary of Agromedicine Released—Fulfills Founder's Vision

As one of the founders of Agromedicine in North Carolina, and more recently the NC Agromedicine Institute, Dr. Ernest Hodgson, Distinguished Professor Emeritus of Toxicology in the College of Agriculture and Life Sciences (CALS) at NC State University, sought to elevate the science and academic rigor of agromedicine as an emerging discipline. The unveiling of the online Dictionary of Agromedicine is a major accomplishment toward that goal.

Available online on the CALS Department of Applied Ecology’s website, the Dictionary of Agromedicine is published in a state-of-the-art platform that allows worldwide accessibility and ensures that the resource is current and accurate. The dictionary is searchable and includes more than 2,200 terms, with links to related terms and relevant images. The Dictionary’s multi-disciplinary editorial team was led by Dr. Hodgson and Dr. W. Gregory Cope, William Neal Reynolds Professor, Department Extension Leader, and NCSU Campus Coordinator for Agromedicine in the CALS Department of Applied Ecology.

Dr. Cope reflects: “The culmination of the Dictionary of Agromedicine has been a long-time vision of Dr. Ernest Hodgson, who was instrumental in establishing Agromedicine in North Carolina in 1987. I am honored to be the dictionary’s Co-Editor with him. This online, dynamic resource will be of value to Agromedicine practitioners and researchers for years to come.”

Dr. Hodgson adds: “While the primary purpose of any dictionary is to define, at greater or lesser length, the meaning of words, the Dictionary of Agromedicine serves two additional purposes: first to bring together those disciplines that contribute to Agromedicine and second, to define Agromedicine as a discipline in its own right.”

Many contributors made the Dictionary of Agromedicine a reality, including Ricky Langley, MD, MPH in the NC Department of Health and Human Service’s Division of Public Health, Occupational and Environmental Epidemiology Branch and Annette G. Greer, PhD, MSN, RN, Associate Professor in the East Carolina University Brody School of Medicine’s Department of Bioethics and Interdisciplinary Studies.

Dr. Langley states: “As each specialty has its own jargon, it is time that Agromedicine be recognized as a specialty that crosses many disciplines, and therefore the Dictionary of Agromedicine makes it possible for these various disciplines to communicate on the same playing field.”

As both a science and a field of health and safety practice, Dr. Greer highlights the Dictionary’s importance: “The multidisciplinary nature of Agromedicine requires common nomenclature to ensure reduction of medical errors when dealing with the health and safety of the population served. Use of a common language allows for open communications across environments — from field to primary care to emergent care — and thus increases the quality of care delivered.”

A first in the field, the Dictionary of Agromedicine will fill a void for researchers, educators, and practitioners alike. This vital resource will bridge the multi-disciplinary nature of agromedicine and ultimately serve the people who provide safety and health services to those who bring food to our tables and provide resources for our shelter and clothing needs.

The NC Agromedicine Institute is a partnership of East Carolina University, NC A&T State University, and NC State

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In a rural or agricultural setting, the first person to arrive on the scene of a farm incident is most often a family member, friend, or employee. Actions taken – or not taken – by those first to arrive are often critical to the survival and well-being of the victims. Critical actions include: providing accurate directions for emergency responders to find the scene quickly, determining if the scene is safe to access, turning off equipment, and administering appropriate first aid.

**First on the Scene training** will prepare NC farm families and employees to respond calmly and competently until first responders arrive to provide rescue and medical procedures.

NC Tobacco Trust Fund Commission Funds First on the Scene

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Funded by a 2-year, $140,000 grant from the NC Tobacco Trust Fund Commission, the **First on the Scene project** will provide training in incident assessment and first aid skills for up to 400 farm family members and employees. Participating farms may access up to $250 in cost-share funds for safety equipment, such as first aid kits or fire extinguishers. Training in the unique nature of agricultural incidents for emergency responders will be provided, with up to $1,250 in cost-share funds for specialized response equipment. Agricultural youth will be trained at an annual gathering such as the FFA Convention.

The statewide project will be rolled-out in spring 2015. Contact NCAI Associate Director LaMar Grafft at grafftl@ecu.edu for upcoming events.

**Welcome Jessica Wilburn!**

The Institute welcomed Jessica Wilburn, MSN, RN as its new AgriSafe Network of North Carolina Nurse (AgriSafe-NC) Coordinator on February 23. Jessica and her husband, Mark, currently own and operate a cattle farm in Randolph County.

Growing up in a small town in the Piedmont, Jessica had the opportunity to work on her aunt and uncle’s farm that consisted of poultry, cattle, sheep, goats, and hay. She also had a summer job during college where she was a farrowing hand for a fairly large sow operation.

Jessica attributes her decision to enter healthcare to an ‘amazing role model’ – her mom, who is an occupational health nurse- and a couple of aunts who are also nurses. Since completing her undergraduate and graduate degrees in nursing from the University of North at Greensboro, Jessica has primarily worked in emergency medicine.

The enthusiasm that Jessica displays is contagious. ‘I have the ability to bring together the best of both worlds (farming and nursing) for my career. I look forward to being able to use my experiences in leadership, education and emergency services to assist me in growing in my new role and my career.’

Jessica will be responsible for day-to-day operations of the AgriSafe-NC program including working closely with local AgriSafe-NC nurses and county Cooperative Extension agents who are part of the current Certified Safe Farm-NC and AgriSafe-NC expansion program supported by the NC Tobacco Trust Fund Commission.

Dr. Phyllis Horns, Vice Chancellor for Health Sciences, has committed funding for the Nurse Coordinator position through June 30, 2016 with the Institute responsible for securing private donations and/or grants to secure the position after that time. Organizations and/or individuals interested in learning how they can assist with funding for this mission-critical position should contact Robin Tutor-Marcom at 252.744.1008 or via email: tutorr@ecu.edu.

LaMar Grafft will provide First on the Scene training.
Rosmann Workshop Shares Strategies for Farm Family Stress

Independence, ties to the land, competitiveness, work ethic: all attributes that make farmers successful, but that may lead to conflict among families that farm together.

Dr. Mike Rosmann, Agricultural Psychologist and Iowa farmer, life’s work and passion has been to provide behavioral health support to farm families and employees. At an afternoon workshop on January 30 in Kannapolis, he shared decades of experience and insight with 20 participants. The goal: to assist farm family members in learning simple tips for coping with everyday stressors and major life events, such as financial strain, caring for aging family members, and farm succession.

Dr. Rosmann shared the concepts that set farm families up for both success and strife. The agrarian imperative is an inherited drive to acquire land and be productive farmers, while farm family members also learn and reinforce the belief that successive generations are expected to continue farming. This inherited and learned drive to work hard, coupled with an aptitude for working in isolation, leads to family conflict and an inability to resolve it. Contributing stressors include the stressful, demanding nature of agriculture itself, substance abuse, suicide and injury risks, physical impact of stress, and lack of training in managing behavior and relationships. All of this explains why 40% of US farmers have no wills or estate plans and the suicide rate is 60% higher among farmers.

In a breakout session, small groups of participants explored the major stresses affecting them, their families, and farms. To handle competitiveness and family strife, Dr. Rosmann provided guidelines for holding farm business meetings and establishing a family inheritance plan. Recommendations include holding the meeting at a neutral location and time (not during a holiday), taking meeting minutes, setting up ground rules for thoughtful and respectful communication, and coming to consensus solutions. Many families benefit from using an outside mediator.

The trusting environment set by Dr. Rosmann and participants themselves allowed participants to openly share their personal concerns. In summing up the value of the workshop, one participant said: “We don’t talk about this enough.” The workshop was sponsored by NCAI and the NC AgrAbility Partnership.

For more on Dr. Rosmann’s work and resources visit: www.agbehavioralhealth.com.


LaMar Grafft and Robin Tutor-Marcom of NCAI welcome Dr. Mike Rosmann of Iowa to North Carolina.

Let’s Talk About Arthritis (Hablemos Sobre Artritis):
An Arthritis education program for lay health workers
Train-the-Trainer Workshop

Eastern NC Training:
NC Agromedicine Institute
East Carolina University- West Campus
1157 VOA Site C Road,
Greenville, NC 27834
Presented by NC AgrAbility Partnership
Thursday, April 23, 2015
9:30am - 4:00pm

Training series presented by the NC Agromedicine Institute with the Arthritis Foundation- MidAtlantic in partnership with the NC AgrAbility Partnership and made possible by a grant from the Agricultural Safety and Health Council of America

Training in Spanish & English. Free registration & lunch!

Learning Objectives:
At the end of this session, participants will be able to:
1. State the importance of arthritis education for Farmworkers
2. Describe what osteoarthritis is
3. Identify risks factors for Osteoarthritis
4. List ways to lower risk of Osteoarthritis

Registration open until April 20, 2015. For questions or to register, contact Nick Turkas, Arthritis Foundation- MidAtlantic 800-365-3811 OR NTURKAS@ARTHRITIS.ORG
ALSO REGISTER ONLINE AT HTTP://WWW.NCAGRABILITY.ORG/OUR-SERVICES/LETS-TALK-ABOUT-ARTHRRITIS/
Outdoor workers, such as foresters, loggers, and park rangers, are exposed to ticks and mosquitoes to a greater degree than the general public, hence increasing their risk of vector borne disease. Our pilot study evaluating permethrin-treated clothing worn by foresters in the Central Appalachian region of the United States shows that more control (85%) participants were exposed to at least one tick during the period of study compared to treatment (52%) participants; however, control participants received a lower rate of tick exposure (0.15 tick bites/hour spent working outdoors; 13 bites/person) compared to treatment participants (0.27 bites/hour; 21 bites/person) (Richards et al. 2014). The same study showed that most (94-100%) foresters had experienced at least one tick or mosquito bite at work and some reported a history of tick borne disease. We continued our evaluation of permethrin-treated clothing by assessing the extent to which external factors (i.e. fabric type, light exposure, temperature, number of washes) affected permethrin concentration and mosquito knockdown/mortality (Richards et al. 2015). Our findings that fabric material and washing frequency affected permethrin content and that washing and light exposure reduced mosquito knockdown/mortality highlight the need for additional worker protection measures. We recommend that workers use repellant sprays on exposed skin and consider having multiple sets of work wear treated with permethrin to provide adequate protection against mosquitoes and ticks. A major focus area addressed by this research to mitigate occupational health hazards is the importance of worker understanding of vector borne disease risks and options for protection. These pilot studies provide a foundation for future studies to improve risk assessment of outdoor work environments and protect worker health. References for peer-reviewed publications from this work may be found on Dr. Richards’ and Dr. Balanay’s web sites.

ABOUT THE INVESTIGATORS
Dr. Stephanie L. Richards is an Assistant Professor in the Department of Health Education and Promotion, Environmental Health Sciences Program at East Carolina University. She completed her BS (Biology) and Masters in Environmental Health at East Carolina University and PhD (Entomology) at North Carolina State University and has previously worked at the University of Florida, Florida Medical Entomology Laboratory, and Craven County Environmental Health. She studies biological and environmental factors affecting vector ecology and vector competence, role of mosquitoes in the spread of emerging pathogens, spatial ecology of vectors and vector-borne disease, vector-borne disease and public health, risk assessment of vector borne disease in outdoor workers, and insects of forensic importance. Learn more about Dr. Richards by visiting her institutional webpage: http://www.ecu.edu/cs-hhp/hlth/richardss.cfm. Dr. Richards can be contacted at richardss@ecu.edu.

Dr. Jo Anne G. Balanay is an Assistant Professor in the Department of Health Education and Promotion, Environmental Health Sciences Program at East Carolina University. She is a certified industrial hygienist since 2008. She earned her BS (Public Health) and Masters in Occupational Health at the University of the Philippines Manila, MS (Environmental Health-Industrial Hygiene) at the University of Minnesota, and PhD (Environmental Health-Industrial Hygiene) at the University of Alabama at Birmingham. Her research involves the assessment of occupational health hazards among understudied working populations, the application of activated carbon fibers for the improved design of respiratory protection, and the effectiveness and use of personal protective equipment for worker protection. Visit Dr. Balanay’s institutional webpage at http://www.ecu.edu/cs-hhp/hlth/ehst/balanayj.cfm. Dr. Balanay can be contacted at balanayj@ecu.edu.

Dr. Stephanie L. Richards, Assistant Professor, ECU Environmental Health Sciences Program

Dr. Jo Anne G. Balanay, Assistant Professor, ECU Environmental Health Sciences Program

Drs. Richards and Balanay use microscope and gas chromatography techniques in their research.
University and collaborates with many state and community partners, including NC Cooperative Extension. The Institute’s mission is to promote the health and safety of those who work in agriculture, forestry and fishing through research, intervention/prevention, education, and outreach.

The Institute’s Director, Robin Tutor-Marcom acknowledges Dr. Hodgson’s ongoing contribution: “For more than two decades, Dr. Ernie Hodgson has provided unwavering leadership as a co-founder, researcher, and faculty affiliate of the NC Agromedicine Institute. Although now a Professor Emeritus, Dr. Hodgson continues his commitment to the Institute and the field of agromedicine as demonstrated by his leadership in initiating, coordinating and authoring a significant portion of the Agromedicine Dictionary. The Dictionary will be an invaluable tool going forward for both students and professionals working in the field. Many thanks are due to Dr. Hodgson and other faculty affiliates and community partners that assisted in making the dictionary a reality.”

The Dictionary of Agromedicine may be accessed directly at: agromedicinedictionary.ces.ncsu.edu. In addition, a link is also found on the NC Agromedicine Institute web at ncagromedicine.org. The Dictionary editorial team appreciates the technical expertise of NC Cooperative Extension’s Mike Vysocka and Rhonda Conlon and web designers Neil McCoy and Shane McCoy in making the Dictionary of Agromedicine possible as an online resource.

Moving forward, the dictionary will continue to grow and improve, and corrections as well as suggestions for new terms, deletions and other changes are welcome. For more information contact Greg Cope at greg_cope@ncsu.edu.

Out and About with Certified Safe Farm and AgriSafe-NC

Franklin County Extension’s Charles Mitchell (R) and Tracy Perry (L) completed a Certified Safe Farm on-farm safety review at Foster Family Vineyards.

Wilson County Extension Agent Billy Little promotes Certified Safe Farm at the NC Sweetpotato meeting.

AgriSafe-NC’s Tamí Thompson chats with an Ag-T Aggie fan at the NC Cattlemen and Dairy Conference in Hickory.

Alexander County Extension Agent Allison Brown talks with a farmer about Certified Safe Farm at the corn and soybean meeting.
Progressive Agriculture Farm Safety Day

First Aid station teaches you to see what you have on hand in an emergency—even a stick and a shoestring.

A lot of kids had a lot of fun learning a lot about health and safety. A great day at Lazy O Farm in Johnston County!

DummyDan is prepped for PTO safety demo by Johnston County Extension Agent Tim Britton.

Cool new earplugs make learning about hearing protection around loud tractors fun.

Johnston County Extension Agents Amie Newsome and Shaw Banks show how to think twice with Chemical Look-a-Likes.

**SUPPORT THE INSTITUTE**

*The NCAI invites you to help further its mission through your contributions to the following funds:*

**NC Agromedicine Institute Fund** (for current and ongoing activities): Make check payable to “Medical & Health Sciences Foundation” with memo designation “NC Agromedicine Institute.” Mail to NCAI, c/o Director, 1157 VOA Site C Road, Greenville, NC 27834. Make a secure online donation at https://piratealumni.ecu.edu/ccon/new_gift.do?action=newGift Go to ‘Click here to choose the designation(s) for your gift’ (under Gift Information in middle of page). On the next page, click Agromedicine Institute and then NC Agromedicine Institute Fund.

**North Carolina State University Agromedicine Endowment** (for long-term sustainability of Institute) OR **North Carolina State University Agromedicine Enhancement Fund** (for current and ongoing activities): Make check payable to “NCSU Agromedicine Endowment” OR “NCSU Agromedicine Enhancement Fund.” Mail to NC Agricultural Foundation, c/o Chris Wessel, Campus Box 7645, Raleigh, NC 27695-7645. Make a secure online donation at: https://ccfn.ncsu.edu/advancement-services/giving/A/
Agromedicine, AgrAbility and Friends at the Southern Farm Show

LaMar Grafft demonstrates how to set-up a lifeline for safe grain bin entry.

New this year! Eddie Weaver, Eddie Everett, and Cynthia Speight of the NC Department of Health and Human Services Division of Services for the Blind shared time and resources at the NC AgrAbility Partnership’s Farm Show display.

Mr. John Alton and Ms. Martha Holshouser, Vietnam veteran and beef producers from Rowan county and self-proclaimed ’Michele’s AgrAbility Groupies’ with Michele Proctor & Helen Peel.

NC AgrAbility Partnership Coordinator Michele Proctor and NCSU Bio & Ag student Helen Peel discuss quad-bar and other ATV safety with Martha Holshouser.

NCAI Director Robin Tutor talks with Kelly Broughton of the NC Department of Health and Human Services Division of Public Health Pesticide Illness Surveillance Project, who provided lanyards for Agromedicine-donated safety glasses to farm show participants.

Agromedicine volunteer Charles Young prepares to demonstrate the dangers of PTO entanglement.
CALENDAR

May 20, 2015. 12 noon – 2 pm. NCAI Board of Partners meeting. Randolph County Extension Center, Asheboro. www.randolph.ces.ncsu.edu
June 4-6, 2015. NC Primary Care Conference. Wilmington. www.ncchca.org

MONTHLY AgriSafe Network Webinars. www.agrisafe.org/training/
For more, visit the NCAI calendar at www.ncagromedicine.org

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