

Atlantic Poultry Research Institute

NEWSLETTER



February, 2001

CHAIRMAN'S REPORT

APRI Board of Directors continue to develop initiatives to advance the current and potential research on poultry within the region. The presence of the additional two researchers featured in the last newsletter have expanded the scope of research initiatives. The Board of Directors are attempting to increase the awareness among participants involved with poultry in Atlantic Canada as to the state of poultry research facilities. The focus of this awareness is to provide the proper physical structures to ensure research can be carried out effectively. Modern and mechanized barns are needed to allow research to be done.

The Chairman and Board of Directors look for your input to keep APRI connected to the industry it serves.

SAY GOODBYE! SAY HELLO!

The goodbye is for Jennifer Spencer the APRI Office Manager. Jennifer has left APRI to start a family. Jennifer always was brave in starting new adventures. She is doing this with twins. Best of Success to you Jennifer.

Say hello to Natalie Cole. Natalie brings a wealth of expertise to the position of APRI Office Manager. Her expertise in finance, office management, people management and communications will be excellent assets. Natalie can be reached at 893-6657 or via email ncole@nsac.ns.ca.

Derek Anderson,
Chairman



APRI DIRECTORS AND STAFF

Left to Right:

Front Row: Janice MacIsaac, Lynda MacSwain, Dr. Colleen Home, Dr. Derek Anderson (Chairman), Alex Oderkirk (Secretary), Dr. Fred Kibenge

Middle Row: Gerry Kennie, Allan Donkin, Dr. Fred Silversides, Rick Bennett, Terry Ells

Back Row: Natalie Cole, Glen Jennings, Steven Eadie, Dr. Bruce Rathgeber

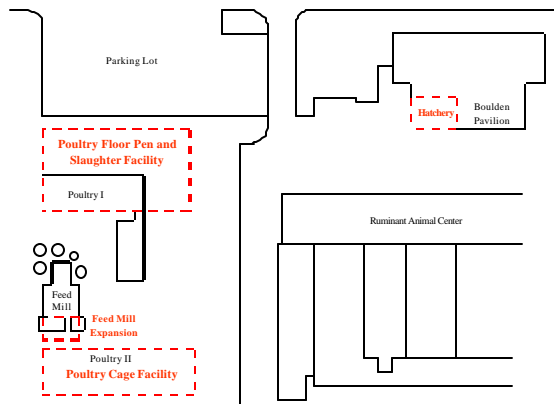
Missing from photo: Ron Mekers

POULTRY FACILITIES RENEWAL COMMITTEE

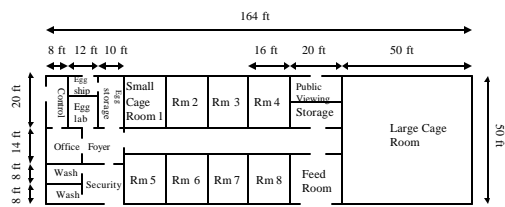
Alex Oderkirk, Secretary

The outdated and poor physical condition of the poultry facilities at the NSAC along with Canadian Animal Care Committee condemnations point firmly to replacement. Facilities are needed for quality research and for teaching and training students about poultry for our aggressive poultry industry.

Last September the APRI formed a sub-committee (Poultry Facility Renewal Committee) to spearhead the project to see new facilities built at the NSAC. Full replacement of the poultry facilities is the goal of this committee, with an aggressive two year building plan.

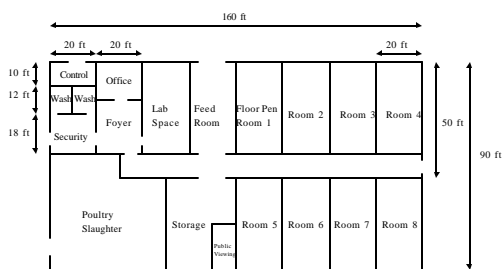


A flurry of meetings have been held with different groups. In October the project was launched with meetings with Animal Science staff and Department and Principal. In December plans were presented to Department of Agriculture & Fisheries staff. Committee reps met with the regional Atlantic Provinces Agricultural Services Coordinating Committee group in mid-January about the project. Producer Boards were forwarded update information on our activities and plans to date. A meeting with the Minister of Agriculture & Fisheries was held February 2, 2001.



Poultry Cage Facility

In February equipment has been acquired by APRI from the Agriculture and Agri-Food Canada, Central Research Station in Ottawa. This includes a complete processing line and equipment and walk-in coolers & freezers; a complete hatchery with accessories; a full egg washing & grading unit as well as other miscellaneous equipment.



Poultry Floor Pen Facility

Today we stand in need of building plans to enable us to get a firm dollar value for this project. From the meeting with the NS Minister of Agriculture & Fisheries the Development Fund was offered, for building plans, 50% funding up to \$20,000.00. When cost estimates from the plans are in hand the financial support will be actively sought from all players. The funding formula is 40% Federal funds, 40% Provincial funds(NS, NB, PEI & NFLD) and 20% Industry funds. Funding will be sought through appropriate funding agencies. With the equipment already obtained and some substantial industry dollars already indicated for the project we are off to a good start to see this project come to fruition within our two year goal.

RESEARCH UPDATES

A Message from Dr. Bruce Rathgeber

This January marks the one year anniversary of my arrival to Nova Scotia and the APRI research team. Between teaching duties in Plant and Animal Science and developing a research program at the NSAC I have been very busy.

Current research includes investigating the use of supplementing broiler chicken diets with additional levels of the essential amino acid tryptophan in attempt to reduce stressful behavior during rearing. Several techniques to monitor behavior are being implemented, as well the rate of growth and feed conversion of birds is being evaluated. Of special interest is the effect on the final product, the broiler carcass, and how changing the bird's ability to cope with stress may influence the quality of meat produced.

Research initiatives with turkey production include the evaluation of a highly digestible nutritive supplement to be administered to multi-marketed birds during preslaughter feed withdrawal. This will allow birds to consume nutrients up until they are loaded for transport, minimizing weight loss while allowing clearance of the lower intestinal tract necessary for contamination-free slaughter.

I am also involved in a collaborative effort to investigate the development of an on-farm unit that will humanely dispose of end-of-cycle laying hens while producing a high quality source of protein for inclusion into livestock rations. The development of meal from whole hens using organic acids to preserve the product was initiated by Dr. Kirsti Rouvenin-Watt of the Fur Institute.

I look forward to continuing developments that will serve the Atlantic Poultry industries in the year to come.

Dr. Bruce Rathgeber
Poultry Professor

A Message from Dr. Fred Silversides

One of the problems I have been thinking about is the bones of old hens become brittle. They might break while she is still in the cage, reducing egg production, or in transport between the laying cage and a slaughterhouse, which is an animal welfare concern.

Calcium is a major constituent of both bones and egg shells, an unfortunate coincidence for bones when an average hen lays an egg nearly every day. The calcium for the eggshells comes from the diet during the day and is stored in a special kind of bone called medullary bone until night, when it is used to produce the shell for tomorrow's egg. If the medullary bone is short of calcium on any one day, the hen will form the shell anyway, but she'll get the calcium from structural bone. Over the course of a laying cycle, this weakens her bones.

This might appear to be a simple problem to solve by adding calcium or vitamin D3 to the diet, but hens will only absorb a certain amount of calcium and this amount decreases as she ages. As well, once she starts to lay, it is extremely difficult for her to add to her structural bone. Assuming adequate nutrition during the laying period, a hen's bone strength at the start of lay determines the strength at the end.

We hope to compare the bones of hens of an unselected layer line with those of commercial white and brown egg laying strains throughout a full laying cycle. We plan to postpone the sexual maturity of half of the hens by keeping the day length short for an additional two weeks. We expect to see differences between strains, differences due to body weight and hope that giving additional time to form structural bone before the start of lay will produce stronger bones in old hens. Knowing the effect of strain, body weight and time of sexual maturity could contribute to resolving a major concern in poultry production.

Dr. Fred Silversides
Agriculture & Agri-Food Canada



Ron Mekers, research technician and Catherine Joudrey (St. Mary's CO-OP student) placing turkeys.

Snippets

October 19, 2000 - Dr. Silversides and Dr. Rathgeber made a presentation on the new poultry facilities to the NSAC, Dept. of Plant and Animal Science

October 25, 2000 - Dr. Silversides and Dr. Rathgeber presented information on current and future APRI research at the Chicken Producers Association of Nova Scotia (CPANS) Semi Annual meetings in Kentville, NS.

October 30, 2000 - APRI Building Funds Committee met with Dr. Coffin to discuss the need for new facilities for APRI's research program.

Dr. Derek Anderson met with Catherine Bielik and the Directors of the Nova Scotia Chicken Producers Marketing Board in December to present research priorities.

Success Stories:

The Nova Scotia Department of Agriculture & Fisheries, Programs & Risk Managements, Agri-Focus 2000 call for Letter's of Intent has been met with some success. Dr. Bruce Rathgeber has been asked to submit a detailed proposal for Growth performance and muscle protein turnover of three broiler chicken strains fed supplemental tryptophan. Dr. Fred Silversides also met with success and has been asked to submit a detailed proposal for Evaluation of an alternative oilseed meal in layer diets.



Grad Students (left to right) Jennifer Saunders, Karen Burgoyne, and Anita Menon. Missing from photo Vanessa Churchill.

This newsletter is a publication of the Atlantic Poultry Research Institute (APRI). Its role is to keep those interested in poultry research activities in Atlantic Canada informed on the Institutes's plans, activities and achievements.

The purpose of the Atlantic Poultry Research Institute is to further the interests of the regional poultry industry through research. It will endeavor to do this through the following objectives: 1. To serve as a vehicle for consultation amongst all stake-holders in the Atlantic poultry industry regarding research and development needs; 2. To encourage joint participation by industry and research institutions in setting research priorities; 3. To integrate the poultry research and development activities of the Nova Scotia Agricultural College and the Atlantic Veterinary College into one strong regional program; 4. To solicit funds for poultry research development.