



ANS NEWS LETTER

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Special Reminding

“The best way to thank you for your help on this project is to keep you informed of the outcome and we promise to do that. Meanwhile, you have played such an important role and your help won't be forgotten. Thank you Ms. J.M.P.V.K. Jayasundara.”

Launching ceremony of ANS NEWSLETTER

Animal Science Society of Uva Wellassa University, Proudly launched “ANS NEWSLETTER” for the first time in the history of Uva Wellassa University on 25th on April 2018. The ceremony took place with the honorable participation of Vice Chancellor Dr. J.L. Rathnasekara as the Chief Guest at the Senate Auditorium of Uva Wellassa University from 5.30 pm onwards.



1st Volume of ANS NEWSLETTER

Over 30 distinguished Guests of Academic staff and non-academic staff did attend to this ceremonial event along with the first, second and third year ANS students to share the success of Animal Science Society. Mr. Dinesh Dunukara, the Vice President of Animal Science Society welcomed all the guests for the event and Mr. Nalin Jayantha, Junior Editor of Animal Science Society explained the objectives of this journal. Further he said that “launching of this newsletter will be a platform to all students in the society to express their findings and ideas. Also it will be a showcase to the outstanding ANS



ANS NEWSLETTER is handing over to Senior Editor of the Animal Science Society, Dr. Sandun Abeyrathne

students". With this launching, ANS NEWSLETTER will be published bi-annually. Marking the symbolical launching of the ANS NEWSLETTER, first publication was handed over to the Chief Guest Vice Chancellor, Dr. J.L. Rathnasekara followed with to the Dean, Faculty of Animal Science and Export Agriculture and rest of the guests.

Animal Welfare

Animal welfare is a serious topic in current society. Ensuring animal welfare is a human responsibility that includes consideration for all aspects of animal well-being. As persons catering to the countries livestock sector, all of us have a responsibility to look into this issue. It states how an animal is coping up with the condition in which it lives. This includes consideration of all aspects of animal well-being; including having proper management, nutrition, disease prevention and treatment and human handling. An animal will be in a good state of welfare if it is healthy, well-nourished, safe and comfortable and able to express natural behavior unless it is not suffering from unpleasant states such as pain, fear, and distress.

Apparently, every animal has the capacity to experience physical and mental suffering and to experience pleasure and acceptance. So as a nation we all are collectively responsible for determining what sort of lives these animals will lead. Actually, there are various perspectives on animal welfare that are fleeced by personal values and experiences. There are also numerous means of measuring animal welfare including health, productivity, behavior and physiological response. Thus, farm animal welfare is high on the agenda of many members such as the general public, food business, farmers and farm assurance scheme and of course, animal welfare organizations.

So in briefly animal protection is not a radical idea. It involves simple principle that as animals too feel pain, joy, and fear, they should be protected from suffering. It is simple as that. The only thing that matters is the attitude. Therefore, we have to be conscious that until we extend our circle of compassion to all living things, humanity will not survive for long.

Nalin Jayantha (2014/2015 Batch)

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"Pranama" 2017 was an appreciable event organized by the Animal Science 8th generation of Uva Wellassa University. Main objective of this event is to express the heartfelt gratitude for honorable lectures who helped on their academic carrier.



"Pranama - 2017"

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"Prabhashwara"-2018 was an event that organized by the Animal Science 9th generation of Uva Wellassa University, to give their profound gratitude for honorable lectures who guided and inspired them in their academic carrier to enlighten their lives. Honorable Dr. J.L. Rathnasekara, Vice Chancellor of Uva Wellassa University was the chief guest of this event. And also through the "Prabashwara" 2018 they were expected to give their gratitude for academic staff in other faculties who motivate them to the path of success.

Udayanga Pushpakumara (2013/2014 Batch)

Cloning

Cloning is an extended area of artificial breeding technique. This technique is used for making similar genetic copies. Cloning technique is used to make improved breeds. There are mainly two methods of cloning as Artificial Embryo Twinning and Somatic Cell Nuclear Transfer (SCNT).

The processes of Artificial Embryo Twinning include separating of early embryo into individual cells and allowing them to divide in the Petri dish for a short period of time. Those divided embryos are placed into a surrogate mother where they accomplish their full development. Somatic Cell Nuclear Transfer (SCNT) is the second method. It is the method of nuclear transfer.

Researchers isolate a somatic cell from the donor. Remove the nucleus and all of DNA from an egg cell. Then transfer the nucleus from the somatic cell into the egg cell. After a couple of chemical tweaks the egg cell, with its' new nucleus behave just like a freshly fertilized There are various obstacles and problems regarding cloning. According to the sources, these cloning animals age faster than the normal animal. Less accumulation of facts regarding the genetic diseases is also another obstacle come across the researchers during the introduction of these cloned animals to the public.

The cost of production is very high for this. The whole process is inefficient comparatively. Ethical and legal aspects have to consider during the development of the cloned animal. Most of the animal welfare associations consider cloning as a violation of animal rights. There is a hesitation of consumption of cloned animal products and cloned animals directly. This condition is due to a lack of knowledge regarding cloned animals.

Cloning technique is widely used in the livestock industry to develop disease-resistant species, species resistant to environmental hardships and species with increased performance, quality, and fertility. This process is mainly used in the production of breeding stock. They are not directly for the consumption. Meat or milk which are produced by the offspring is used in the consumption.



"Dolly the first cloned mammal"

Series of tests and researches were conducted by FDA (Food and Drug Administration) and NAS (National Academy of Science) regarding this issue. According to the results, the products from the cloned animals are safe and similar to the products from the normal animals.

However, the contribution of cloning to the poultry is at the basic stage. Cloning is not in practice, because eggs cannot be removed and implanted.

"An obstacle to avian transgenesis is the low-efficiency of introducing foreign DNA into the chicken genome. Procedures that have worked for other animals are difficult, if not impossible, due in part to the unique reproductive physiology of the chicken. New methods, including the use of transposable elements, show promise but require additional refinement before their utility is confirmed." –Harvey, A.J. et al., *Poultry Science*, February 2002, p. 202.

Some institutions experiment for the formation of chimera instead of cloning. In the chimera, donor cells inject into the freshly laid recipient egg. Demand for the poultry industry is very high in the market. Finding a method to perform cloning in poultry is a huge challenge that comes across when developing cloning with the livestock industry.

"Chickens are suitable for gene manipulation because, unlike other domestic animals, they mature quickly, and a single bird can have thousands of offspring. Foreign genes need only to be inserted into one generation, which passes the genes on. Unfortunately, genetic material cannot be introduced into recently fertilized ova of birds this way." – Test-tube chicks pave way for 'super-animals.' – Lionel Milgrom, *New Scientist* February 4, 1988, p. 36

This statement clearly indicates the necessity of the cloning in poultry. And single research can change the whole livestock industry. Necessity is there, but have to figure out the way.

M.H.U. Maggonage (2016/2017 Batch)

Where are we heading to...?

Never before in the history have there been so many people on earth as of right now. The numbers have skyrocketed from 1 billion in the 1800s to 2.3 billion in

1970, 7.4 billion in 2016 and a staggering 7.6 billion as of now in 2018. This means that the world population increased fourfold by the last century. Already more people die from hunger each year than Malaria, Aids, and Tuberculosis combined. A child dies every 10 seconds, which means that there may be a mother crying even while you are reading this now.



Overpopulated urban area

About 21,000 people die every day because of hunger and it is estimated that over 2 billion people will be hungry in the year 2050. By 2050 the world's population will likely increase by 35%. Food prices will continue to rise as the demand is not met, leading to increased famine across the globe. According to Winrock (1992) and De Boer, *et al* (1994), if food security is defined as "...access to enough food for an active healthy life" livestock can make a major contribution.

An adequate quantity of balanced and nutritious food is a primary indicator of the quality of life, human welfare and development. Animals are an important source of food, particularly of high-quality protein, minerals, vitamins, and micronutrients.

The value of dietary animal protein is in excess of its proportion in diets because it contains essential amino acids that are deficient in cereals. Eating even a small amount of animal products corrects amino acid deficiencies in cereal-based human diets, permitting more of the total protein to be utilized because animal proteins are more digestible and metabolized more efficiently than plant proteins (Winrock, 1992, De Boer, *et al*, 1994). Therefore with the drastic increase in population by the midcentury, the unprecedented increase in demand for meat, fish, eggs, milk and other animal

products is inevitable. But how do we feed 9 billion people by 2050? We could start by eliminating waste in the food chain which would drive an increase in equity and access to food.

Investing in agricultural research and development aids in increasing the food we grow, in other words boosting the yield. We can also expand the safe space by adapting cropping systems in hotter climates through innovation such as improved crop and livestock genetics and careful matching of crops and animal breeds to suitable environments to gain maximum productivity.

Sandhithi Fernando (2016/2017 Batch)

"IMPREUNA" get together of ANS batches

Animal Science degree programme is a unique degree programme awarded by the Uva Wellassa University of Sri Lanka.

Being there from the inception of the university, Animal Science degree programme proud holds a history of twelve generations. It is with humble pride, we mention the large number of successful graduates who are currently employed in so many institutes locally and internationally.

"Impreuna" is the annual get together of all Animal Science batches which was inaugurated in 2017, with the coordination of Sameera Weerasinghe (ANS 8th batch). Building the brotherhood among all ANS batches is the prior intention of the get together.



"Impreuna-2017"



On the dance floor

Especially, this will pave the way for undergraduates to meet graduates and this will be a fantastic opportunity for graduates to meet their colleagues and lecturers who always supported them in their path to success.

Nimantha Rupasinghe (2015/2016 Batch)

Shramadana Campaign

Farm practice is an essential component of the Animal Science Degree Programme. In order to improve the practical in the farm animal management Department of Animal Science organized the “Shramadanaya” event to clean the existing farm land in the university and to identify the potential land for the newly proposed pasture, broiler, and cattle units.



The “Shramadana” campaign was successfully organized and completed by students of Animal Science Degree Programme and Academic staff of Department of Animal Science on Sunday, 26th of August 2018. More than 100 members participated to this event.

With the effort of the staff and the students of the Department the most suitable land for pasture unit, broiler unit, and the cattle shed were identified. This was



followed with a lunch organized by the Department staff which include manioc, sambol, and chicken curry.



Animal Science Society of Uva Wellassa University is really grateful for everyone who gave their great contribution for making this event a success.

Kasuni Siriwardhana (2014/2015 Batch)

Poultry Forum 2018

Department of Animal Science, Uva Wellassa University has organized the 2nd Poultry Forum 2018 (PF 2018) on 28th September 2018 at the University premises under the theme of “**Future of the Poultry World: Smarter and Greener Production**”. This year the event is co-hosted with Crysbro Group of company and many other well-wishers. Academics and undergraduates from eight Agricultural Universities in the country along with expertise from Research Institutes, Industries will participate to this event. It will be a very good platform to discuss the problems associated with the industry where the

universities and research institutes can cater the requirement of the industry.

In order make the event more realistic five guest speeches from five different areas related to poultry industry including poultry feeding, management, diseases and processing followed with new research trends in the poultry industry will be delivered by five eminent resource



“Poultry Forum 2014”

persons as Mr. T. Jeyaharan (Pussella Meat), Dr. Mangala Amarasinghe (Nelna Farms), Prof. H. W. Cyril (Emeritus Professor), Dr. G. A. S. N. Gamlath (Consultant) and Dr. Ms. S. M. C. Himali (University of Peradeniya). This will be followed by research highlights from each universities under the theme of poultry management.

This event will be an immense opportunity to all parties to get-together to discuss the current situation and the future of the industry. Also it will be a good platform to share the knowledge among each parties and undergraduates will be benefited by exposing them in to the industry and their requirement.

Waste Management of Farm Animals

As a result of large number of animals are reared intensively in attempt to increase financial gain it is considered as factory farming. As a result of this factory farming farm pollution incidents and farm waste remains a major crisis. It can be manure from farm animals, animal carcasses from normal mortalities of livestock on a farm.

Unconsumed feed and associated bedding materials and sometimes, animal waste can be dangerous because it carries harmful pathogens which can cause severe problems. These manure from animals makes unpleasant odor and also has an impact on the greenhouse effect. The major Greenhouse gaseous emitted by manure are methane and nitrous oxide. Also, contaminated manure is a good source of diseases. Because of the above reason we have to manage the waste away from animals.

Waste management is to make the best use of the nutrients in manure while protecting natural resources such as water and land. It is a good source of nutrients for crop production and can improve soil quality. There is some kind of waste management systems where Manure is stored in a digester and covered which prevent much of the odor from escaping into the air. Manure on the field is a form of fertilizer, which can be effective in plants growth. The main animal waste production is compost. In this method, organic waste is broken down by the microorganism. In small-scale composting, we can use a small plastic bucket or simple method for composting. Large-scale composting can be done using long rows of waste moved by tractors using the windrowing equipment. In this method, a number of plastic bins may rotate on axles or simply be shaken. Large piles can be turned using a manure fork or bucket loader. Attachment to tractors can be used to turn windrows of composting materials. Certainly, Temperature is a special factor which affects composting.

So in general, to minimize the adverse effects of farm waste, we have to utilize them correctly and of course wisely. Proper waste management contributes to the conservation of water bodies, improvement of the land fertility and protection of the natural environmental resources. Therefore instead of considering it as a burden, we can use it to make a fortune. So, we always have to think about nature first, because we are part of it and you depend on it.

H.G.S.C. Dissanayake (2016/2017 Batch)

General Convocation - 2017



The 8th general convocation of Uva Wellassa University was held at Bandaranayake Memorial International Conference Hall, Colombo on Saturday 11th August 2018 from 1.30 pm onwards. Five hundred and twenty three graduands received Bachelor's Degree under eleven degree programs. The degrees were conferred by The Chancellor of the Uva Wellassa University. Total number of 222 graduands from the faculty of Animal Science and Export Agriculture qualified for the general convocation.

Among them 62 number of graduands represented the Animal Science degree program. It was very pleasure to announce that there were one first class, nine second class upper divisions, twenty two second class lower divisions and thirty eight general passes from the degree program. The Vice Chancellor awarded gold medals for the outstanding performance in degree program.



Among them Asha Weerasooriya Meomorial Gold medal was awarded to Ms. J.M.N.H. Premarathne and Mahinda Katugaha Gold medal for highest achiever in Uva province was awarded to Ms. W.K. Meegahawatte from the Animal Science Degree Program. All Degree programmes in the Uva Wellassa University are unique and driven towards its theme "value addition to National Resource Base". With respect to that, The Animal Science Degree program is also driven towards the theme to innovate future graduates which is having knowledge and skills.