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The Oregon State University Extension Service staff is devoted to extending research-based information from OSU to the people of Warm Springs in agriculture, home economics, 4-H youth, forestry, community development, energy and extension sea grant program with OSU, United States Department of Agriculture, Jefferson County and the Confederated Tribes of Warm Springs cooperating. The Extension Service offers its programs and materials equally to all people.



## Environmental issues to be addressed by youth

**Environmental Stewardship - 4-H curriculum from the National 4-H Council**  
**What Is Environmental Stewardship?**

Environmental Stewardship is the concept of teaching young people how to proactively serve their communities as conservators and protectors of the environment. Youth learn to understand and appreciate expertise and values from a broad range of perspectives and to take responsible action—not only on their own behalf but on behalf of future generations.

The specific goals of the Environmental Stewardship program include: understanding ecological concepts, building an awareness of environmental issues and values, developing scientific investigatory and critical thinking skills, and learning skills needed for effective action. In general, these goals foster leadership skills that allow youth to work as full partners with others to develop creative, community-based solutions to difficult environmental challenges.

**Where Does Environmental Stewardship Fit In This Mission?**

Caring for the environment is one of the most exciting challenges facing our young people today. But more than their enthusiasm is needed. Real care for the environment demands development of the broad view and a range of competencies: the ability to find and evaluate information, the ability to listen well and understand multiple perspectives, the ability to bridge gaps to bring diverse (sometimes hostile) groups together to resolve differences, and the ability to plan and take appropriate action.

National 4-H Council, along with its partners, has developed a series of programs and curricula designed to help youth at all developmental levels acquire these skills.

**Who Will Be Our Partners?**

Successful environmental stewardship programs require a broad view and the ability to fuse a range of diverse and deeply held values. Only the depth of understanding and the breadth of perspective offered by a wide range of organizations and groups can provide these and foster the leadership skills needed by young people as they deal with environmental issues and concerns.

Public and private, profit and non-profit, federal, state and local—each of these partners brings unique resources, skills, and perspectives to the Environmental Stewardship Program.

**What Are The Next Steps?**

Building partnerships, evaluation re-

search, and continuing program and curriculum development: these are the next steps in the Environmental Stewardship program. Whether at the local level, as we strengthen the network of youth practicing environmental stewardship, or at the national level, as we develop and disseminate curriculum, fostering partnerships will be pivotal to the Environmental Stewardship program.

Evaluation is also a next step. Built into each component of the Environmental Stewardship program, evaluation research will result in increased knowledge and increased accountability.

Continuing program and curriculum development are also next steps. In our latest curricula, we continue to address cutting edge environmental issues such as biotechnology in Fields of Genes.

Making Sense of Biotechnology in Agriculture (now available) and transportation in Transportation and Environmental Health (coming soon!).

**How Is Environmental Stewardship Being Implemented?**

Current national partners are working with 4-H staff, volunteers and other environmental stewardship partners to disseminate curricula and support program implementation. Youth and youth leaders are being introduced to the new curricula and programs at Environmental Stewardship workshops. These workshops, with increasingly youth led design and focus, support efforts to involve young people as partners in addressing environmental issues and concerns. In addition, youth wishing to foster environmental stewardship in their states and localities have the opportunity to team up with other trainers for initial learning experiences held at the local, county, or state level.

**How Are Youth Involved In Environmental Stewardship?**

Environmental Stewardship recognizes that young people, their families, and communities are interdependent and capable of working together to shape their reality and address challenges. Using the community development process, Environmental Stewardship seeks to involve youth as full partners capable of leading program initiatives.

Each piece of the Environmental Stewardship program features hands-on, developmentally appropriate activities designed to develop critical thinking and leadership skills. Each piece of the program encourages youth to develop their capacity to plan and take effective, well-reasoned action. In addition, each piece strengthens an ethic of

responsible involvement. By tackling increasingly complex and controversial issues, youth are encouraged to become catalysts for action, generators of knowledge, and full-partners in policy making.

**What's New In Environmental Stewardship?**

New Biotechnology Curriculum, Transportation and Environmental Health, Youth Building Common Ground, Just R 3 It! Recycling Grants, Communications

NEW BIOTECHNOLOGY CURRICULUM Partners: Monsanto & Pioneer Hi-Bred International, Inc.

Fields of Genes: Making Sense of Biotechnology in Agriculture is the newest curriculum from the Cycling Back to Nature series. Topics include sustainability, environmental literacy, understanding biotechnology, and environmental issues and choices. ES0046 \$5.00

To order: Contact the National 4-H Supply Service at (301)961-2934, Monday through Friday between the hours of 8:30 am and 5:00 pm EST.

COMING SOON: NEW CURRICULUM ON TRANSPORTATION AND ENVIRONMENTAL HEALTH—Partner: Honda North America

National 4-H Council is facilitating the development and implementation of a new curriculum that addresses the relationship between transportation and environmental issues.

Among the topics covered: Conserving Natural Resources and Energy; Air Pollution and Climate Change; Land Use; Land and Water Pollution; Individual Transportation Choices and Their Impact On The Environment; How Individuals Can Influence A Community's Environmental Health; and more.

During the Spring of 1998, Transportation and Environmental Health will be pilot tested in classrooms, 4-H clubs, and other educational settings across the country.

COMING SOON: YOUTH BUILDING COMMON GROUND CURRICULUM & TRAINING PROGRAM—Partner: American Honda Motor Company, Inc.

Youth Building Common Ground is a new curriculum and training program that will teach youth in the 4th-8th grades the process skills needed to bring diverse groups of people together, communicate effectively with others, manage meetings, negotiate and problem-solve, resolve conflicts and do basic strategic planning.

Available Summer 1998.

## Community service projects encouraged

by Sue Ryan

It is the 25th Anniversary of the Colgate Youth for America Campaign, which rewards local youth groups for their best service projects. I thought local groups might be interested in the details which I found in a news release on the National 4-H Council's website.

Local clubs and troops of the six largest national youth organizations representing some 13 million young Americans are invited to enter their best community service projects as part of the "Colgate Youth for America" campaign. The award-winning program, now one of the nation's longest running corporate-sponsored civic responsibility programs, celebrates its 25th Anniversary this year.

Colgate-Palmolive Company presents cash grants of up to \$2,000 for the most creative and best executed projects in the U.S. by local units of the Boy Scouts, Girl Scouts, Boys and Girls Clubs, Girls Incorporated, Camp Fire and 4-H.

A celebrity panel of judges who volunteer their time and talent to the campaign determine the top winners. Past judges have included Alex Trebek, Andrew Shue, Ethan Hawke, Jackie Joyner Kersee, Phyllicia Rashad, Jack Wagner, Dean Cain, Jonathan Silverman and more than 40 other popular stars.

Clubs have until March 15, 1998 to develop and execute programs of value to their communities and send in their reports. Participants range from five-year-olds to high school teens.

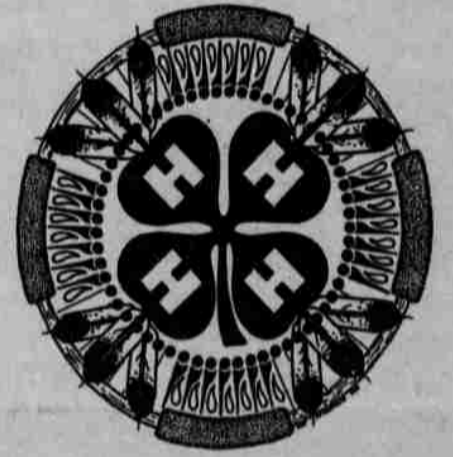
Last year's award winning projects reflect the creativity and resourcefulness of today's kids in their approach to modern problems. A Girls Incorporated unit from Tennessee assisted a local family shelter in establishing a food pantry to help feed current residents and keep a stock of items to take along when they found permanent housing. A Boys & Girls Club from Pennsylvania organized a youth problem-solving "Teen Summit" involving teens from high schools and colleges in neighboring towns. Members attended workshops to train and prepare for the summit at which common problems and creative solutions were discussed. A Connecticut Boy Scout troop farmed a plot of land in the town's community garden to grow produce for a homeless shelter in the state's capital city at a time when budget cuts threatened to produce a shortfall. A Michigan Girl Scout troop established a program for teaching science to young girls ages 5-12. Members

attended training sessions where they learned basic principles of science and were asked to develop creative ways to teach the youngsters. An Oregon Camp-Fire group participated in search and rescue training with the National Ski Patrol, and learned how to assist and administer triage and first aid treatment. A 4-H club also from Oregon, designed and built a park and playground within the courtyards of a low-income housing complex.

Colgate Program Director Michele Macchia says, "We're proud of today's kids who work hard to create a better world for themselves. 'Youth for America' puts the spotlight on these special young people and encourages others to follow their positive examples." To date, the Colgate-Palmolive Company has awarded close to \$6 million to America's young people through "Youth for America." The campaign, initiated in 1972 to encourage social responsibility, has been honored by The White House under five different administrations, has received a Freedoms Foundation Award, is included in The Points of Light directory, and is praised annually by members of Congress, governors and mayors across the nation.

Macchia says, "As this campaign reaches its quarter-century mark, the Colgate-Palmolive Company continues its leading corporate commitment to our nation's children through programs such as Youth for America."

Entry forms are now available through regional offices of the national organizations, or by sending a stamped self-addressed envelope to: Colgate Youth for America Campaign, P.O. Box 1058, FDR Station, New York, NY 1015-1058



## Spread of EIA among horses is quick, sometimes undetected

The following information comes straight from a factsheet put out by the USDA Animal and Plant Health Inspection Service.

Equine infectious anemia (EIA) is a highly contagious and potentially fatal viral disease of members of the horse family. The EIA virus is categorized as a retrovirus; it contains genetic RNA material, which it uses to produce DNA. This DNA is then incorporated into the genetic makeup of infected cells.

Identified in France in 1843 and first tentatively diagnosed in the United States in 1888, EIA has commanded a great deal of attention. There is no vaccine or treatment for the disease. It is often difficult to differentiate from other fever-producing diseases, including anthrax, influenza, and equine en-

cephalitis. EIA is significant historically because it is the first disease of horses proven to be caused by a "filterable virus", one that can survive a special laboratory filtering procedure and remain infectious. EIA is the first retrovirus-induced disease proven to be transmitted by insects. And the virus is the first persistent virus for which antigenic drift was defined. (Antigenic drift is the virus' ability to change its form sufficiently so that it is no longer vulnerable to existing antibodies.)

Finally, EIA is the first retrovirus-induced disease for which a diagnostic test was approved.

**DEGREES OF INFECTIOUSNESS**

When horses are exposed to EIAV, they may develop severe, acute signs of disease

and die within 2 to 3 weeks. This form of the disease is the most damaging and the most difficult to diagnose because the signs appear rapidly, and often only an elevated body temperature is noted. One-fifth of a teaspoon of blood from a horse with acute EIA contains enough virus to infect one million horses.

The clinical signs of the acute form of EIA are rather nonspecific; and in mild cases, the initial fever may be short lived (often less than 24 hours). As a result, horse owners and veterinarians may not observe this initial response when a horse is infected with EIAV. These infected horses often recover and continue to move freely in the population. The first indication that a horse was exposed to and infected with EIAV may well be a positive result on a routine annual test.

Chronic—If the horse survives this first acute bout, it may develop a recurring clinical disease with fever. An infected horse's temperature may rise suddenly to about 105 degrees, or rarely, as high as 108 degrees. Then it may drop back to normal for an indeterminate period until the onset of another episode.

Petechial hemorrhages—Minute blood-colored spots appear on the mucous membranes.

Depression—The horse appears more or less dejected (head hangs low) and generally listless.

Weight loss—The horse may refuse feed or may eat an inordinate amount but still continue an obvious decline from normal weight.

Dependent edema—The horse may develop swelling, which is evidence of fluid collecting under the skin in the legs and under the chest and other underbody surfaces.

Anemia—The horse's blood may experience a marked drop in its red corpuscle count and appear thin and watery. The animal may also have an irregular heartbeat, and a jugular pulse may become evident. The horse with chronic EIA is the classic "swamper" who has lost condition, is lethargic and anorexic, has a low hematocrit, and demonstrates a persistent decrease in the number of blood platelets, coincident with fever induced by EIAV. One-fifth of a teaspoon of blood from a chronic case during a feverish episode contains enough virus to infect 10,000 horses.

Inapparent—By far the majority of horses are inapparent carriers; they show no overt clinical abnormalities as a result of infection. They survive as reservoirs of the infection for extended periods. Inapparent carriers have dramatically lower concentrations of EIAV in their blood than horses with active clinical signs of the disease. Only one horse fly out of 6 million is likely to pick up and transmit EIAV from this horse. All horses infected with EIAV are thought to remain virus carriers for life. The inapparent form may become chronic or acute due to severe stress, hard work, or the presence of other diseases.

**TRANSMISSION**—EIA is considered a classic blood-borne infection. People have played an important role in EIAV transmission over the years by using blood-contaminated materials on different horses. The EIAV most frequently is transmitted between horses in close proximity by large biting insects, such as horse flies and deer flies. The bites from these flies stimulate defensive movement by the horse, which often results in an interruption of the blood-feeding. When interrupted, the fly is motivated to complete the feeding as soon as possible. It then attacks the same or a second host and feeds to repletion. In this manner, any infective material from the blood of the first host which is present on the mouthparts of the insect can be mechanically transmitted to the second host. Insect transmission of EIAV is dependent on the number and habits

of the insects, the density of the horse population, the number of times the insect bites the same and other horses, the amount of blood transferred between horses, and the level of virus in the blood of the infected horse from which the initial blood meal was obtained. The rate of transmission cannot be predicted accurately because of these variables.

**PREVENTING THE SPREAD**—Diagnosis of the disease EIA and of infections with EIAV was not possible until an effective test for antibodies specific to EIAV was described in 1970 by Leroy Coggins. Controlling the spread of EIAV involves minimizing or eliminating contact of horses with the secretions, excretions, and blood of EIAV-infected horses. This has been carried out in most areas of the world by testing and segregating test-positive horses from those that have negative test results. Once the reservoirs of EIAV are identified, separated, and maintained a safe distance from the other horses, the transmission of EIAV is broken. Until all horses are tested, one must assume that each horse is a potential reservoir of EIAV and take precautions to commingle only with horses whose backgrounds are impeccable, i.e., they came from farms where only test-negative horses are found and have never been exposed to test-positive horses.

**WHAT OWNERS CAN DO TO HELP—**

Horse owners can take a number of precautions to reduce the risk of infection.

\* Use disposable syringes and needles. Follow the rule: one horse, one needle.

\* Clean and sterilize all instruments thoroughly after each use.

\* Keep stables and immediate facilities clean and sanitary. Remove manure and debris promptly, and ensure that the area is well drained.

\* Implement insect controls. The local veterinarian or animal health official can provide information about approved insecticides and other insect control measures. Avoid habitats favorable to insect survival.

\* Do not intermingle infected and healthy animals.

\* Do not breed EIAV-positive horses. \* Isolate all new horses, mules, and asses brought to the premises until they have been tested for EIA.

\* Obtain the required certification of negative EIA test status for horse shows, county fairs, racetracks, and other places where many animals are brought together.

\* Abide by State laws that govern EIA. The major regulatory actions to control EIA are carried out by the States. States' rules, while encompassing a much broader scope of EIA concerns, vary considerably and lack uniformity among individual State control programs. Recently, the United States Animal Health Association passed a resolution urging USDA to facilitate the development of a uniform control program for EIA and the interstate movement of horses.

## Stockman's Roundup



by Bob Pawelek  
OSU Extension Agent  
Livestock and Range

"Not enough hay? You say you bought just enough hay to get the cows through the worst winter weather? The cows have been home for a few weeks now. What pasture there is around the place is short, very short. And each plant has been bitten at least twice.

What one must remember is this: it takes at least twice as much winter feed to get the cows back into shape as it does to keep them in shape. Purchasing more hay at this point is futile at best. Besides, it is overpriced. So what options are available?

One suggestion would be to stagger your feeding times at first. That is feed today, skip tomorrow. Or skip two days. Do not skip more than two days, especially if you have nursing calves. Another option would be to purchase block

supplements. These can boost forage intake and digestibility significantly. There is on the market a lowmoisture block. One brand of which I speak is called Crystalyx. Researchers at Kansas State University compared free choice intake and digestibility of a low quality prairie hay for 12 steers given no supplement, and then included 1 lb./day of the block. Results of the feeding trial indicate that the block treatment increased digestible dry matter intake 29%. Results also show digestible fiber intake was highest for the block treatment. Depending on the type of product, low moisture block supplements can be fed for about 14 cents per head per day. So, if you are in the predicament as described above, it might be worth a trip to town to pick up a tub of that stuff. You should separate horses from the feeding area, as this supplement is only for cows. It won't hurt the horses as long as it does not contain an ionophore. But your aim is to cheaply keep your cows in shape. Ask your feed store dealer for details about their product. The weather has been to our advantage, at least so far. I wrote this on New Year's Eve. It may have changed by now.

New vaccine—There will soon be a new vaccine against brucellosis that shows promise for protecting bison against the disease. Bison and elk are the last major sources of brucellosis in the U.S. Scientists with the USDA Agricultural Research service have been checking a new vaccine for its effectiveness

and safety. In an ARS experiment, the scientists have vaccinated 10 bison heifers.

Grazing bill—The U.S. House of Representatives has approved the new grazing bill, formally called the Forage Improvement Act of 1997. The bill would increase cattle industry stability by allowing federal lands ranchers to plan for forage use. The bill would base range management decisions on sound science by requiring scientific rangeland monitoring and allowing agencies to coordinate monitoring with ranchers and qualified rangeland consultants. This bill would also require the US Forest Service and BLM to coordinate grazing management with each other, create discretionary authority for the government and ranchers to enter into cooperative allotment management plans, prohibit subleasing of grazing allotments by absentee ranchers, and implement a grazing fee formula that increases the current fee by 36%.

Organic vaccines?—Plants as edible vaccines are on the way. Genetically altered plants will soon deliver edible vaccines for human and animal use. The technology could be used to immunize animals and solve food safety problems caused by bacteria that infect poultry and other livestock and contaminate meat.

Sign them sell—A report I read in the Wall Street Journal indicates that an ice cream stand in Saranac Lake, New York is the first burger vendor to require customers to sign a waiver before eating any hamburger less than well done.