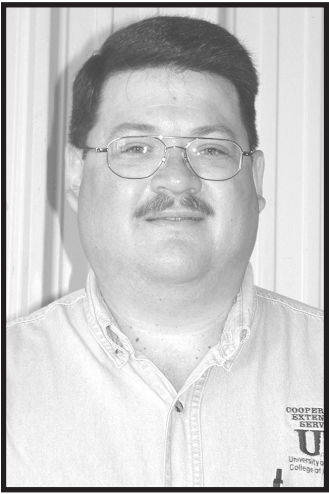


Early detection is key to keep Johne's disease from taking over your beef herd



Eric Baker
Estill County Extension Agent for Agriculture & Natural Resources

According to UK Extension veterinarian Michelle Arnold, Johne's (pronounced Yo-knees) disease is a chronic disease of severe, watery diarrhea and weight loss in adult cattle caused by a bacterium. These bacteria are very hardy due to a protective cell wall that can withstand harsh conditions and allows survival for long periods in the environment. Once the bacteria gain entry into an animal, the organism lives permanently within the cells of the large intestine where it

multiplies and is then "shed" in the feces in large numbers. Johne's is a slow, progressive disease that calves pick up around the time they are born but the clinical signs of weight loss and diarrhea do not show up until much later, generally at 2-5 years of age or even older.

As cow/calf producers, it is easy to buy and sell breeding-age animals, especially bulls, with no obvious problems even though they are already infected with the disease. The problem is difficult to detect early, but infected animals often shed high numbers of the MAP organism on the farm. In ideal conditions with moisture and limited sunlight, bacteria can live 8 months in dry feces, 9-12 months in a manure pit/lagoon, 18 months in a water trough, 9-12 months in freezing temperatures and one or more years on pasture. This is important because the major route of transmission to newborn calves is nursing teats covered in Johne's-infected manure. A small number of calves may get the disease while still in the uterus of an infected cow or may ingest the organism from infected

colostrum or milk. Once infected, there is a long incubation period, sometimes 2-7 years, then the disease begins to progress from a silent stage to an advanced disease stage. No effective treatment is available.

In a typical herd, for every animal in the advanced or clinical stage of disease, often there are many other cattle in earlier stages of the disease. Control measures center upon preventing exposure of susceptible animals to the infectious agent, identifying and eliminating infected animals from the herd and preventing entry of infected animals into the herd. With early diagnosis and prevention of spread, Johne's disease will not develop into a significant herd problem five to ten years in the future.

Buyers of breeding livestock should make every effort to purchase animals that are not MAP infected. Similarly, seedstock producers should anticipate this request and establish a routine of testing and culling any cattle that test positive for the organism. Seedstock herd owners are commonly reluctant to test for Johne's disease for fear that a positive diagnosis will ruin their reputation. However, a herd's reputation may be damaged much more severely by selling an infected animal to a customer and introducing this contagious, incurable disease into the buyer's herd. The U.S. Voluntary Bovine Johne's Disease Control Program speci-

fies the testing requirements to officially classify a herd from Test Negative Level 1 (lowest) up to Level 6 (best). The more years of testing following this consistent regimen will yield greater confidence and knowledge of the true Johne's status of the herd.

So how do you begin? A screening test of all animals at least 2 years of age, such as the Johne's ELISA test for antibodies in blood, is rapid and low cost but not 100 percent accurate. Any positive animals on ELISA should be confirmed by detection of the Johne's bacterium in the feces by polymerase chain reaction. Both of these tests are available at the UK Veterinary Diagnostic Laboratory. For more information, visit their website <http://www.vdl.uky.edu>. Animals found positive should be removed from the herd promptly. Testing and culling over multiple years along with good herd management will lead to zero or low MAP test prevalence in your herd. I would encourage you to contact a local veterinarian to find out more about the control and prevention of Johne's disease.

For more information on livestock diseases and management, contact the Estill County Cooperative Extension Service at 723-4557.

Educational programs of the Kentucky Cooperative Extension Service serve all people regardless of race, color, age, sex, religion, disability or national origin.

Estill Extension Service AGRICULTURE NEWS

76 Golden Court
Irvine, Kentucky 40336
Call 606-723-4557

January 9-10, 2017

Kentucky Fruit & Vegetable Conference

The 2017 Kentucky Fruit and Vegetable Conference is planned for January 9-10, 2017 at the Embassy Suites Hotel off Newtown Pike, in Lexington. The program and registration form can be found by going to our Horticulture Department web site at: <http://www.uky.edu/hort/node/1724>. A copy of the printed program and registration form can be requested from the Extension office.

This meeting will be of great benefit particularly for growers that are considering growing and marketing a crop, as well as for experienced growers.

We encourage all fruit and vegetable growers to attend this very informative meeting.

This year we have sessions on Commercial Fruit and Vegetable Production, Organic Production, Farmers' Markets, Small Fruit Production, Direct and Wholesale Marketing, Greenhouse and High Tunnel Production, the Grape and Wine Short Course, Food Safety and a What to Think About Before You Plant workshop. Preconference Sunday evening sessions include a Plasticiculture Strawberry Short Course, Tree Fruit/Small Fruit and Vegetable Round Table Discussions.

For more information, call 606-723-4557.



Soil in winter

Biological activity continues within soil throughout winter, even below freezing. Up to 70% of gases from the breakdown of plant material, fertilizers, manure and microorganisms occurs in winter. The amount of gas released is affected by the soil temperature, which depends on how much snow is on the ground. This also affects phosphorus and carbon levels available in the soil for spring growth. — Brenda Weaver



Source: www.agr.gc.ca

© 2017 by King Features Syndicate, Inc. World rights reserved.

Stickeler's Puzzle



Find the anagrams in the following sentence. Here is an example:

The building was of **R E C E N T** construction, but the cement had been of poor quality, and the **C E N T E R** was crumbling.

The brilliant chemist not only solved a problem that had plagued scientists for 50 years, he also demonstrated that there were _____ applications of his work. Much of what had been assumed for all those years would now have to be _____.

©2017 King Features Syndicate

Stickeler's Answer on Page 11

PAINTED ROOFING METAL

We offer 16 colors of our #1 grade metal roofing tin cut to the inch. Now with a 40-year warranty, this ensures a roof that will last for years. Higher Gauge -- Same Low Prices!! We carry all metal roofing accessories! Phone in or Fax orders welcome

Call 606-593-7080

We now accept Credit & Debit Cards!

Wolf Creek Metal

Open five days for your convenience

Mon. -Fri. 8am-5

LOCATED

1.5 miles south of Booneville, KY on Hwy. 11

in the Lone Oak Industrial Park



Estill Extension Service AGRICULTURE NEWS

76 Golden Court
Irvine, Kentucky 40336
Call 606-723-4557

Thursday, January 12, 2017 @ 6:30pm

Cattlemen's Meeting Will Focus on VFD

Estill County Cooperative Extension and Estill County Cattlemen's Association will host a cattlemen's meeting on Thursday, January 12th, 6:30 p.m. at the Estill County Extension office.

Our guest speaker will be UK Regulatory Services director Darrell D. Johnson and he will give an overview of the veterinary feed directive law which impacts all livestock owners and veterinarians.

Bluegrass Stockyards of Richmond is sponsoring the meeting and our meal. So we can plan the meal, please pre-register by calling 723-4557 on or before January 9th. The Estill County Cattlemen Association will have their business meeting afterwards.

Sammie's Furniture & Appliances

722 Main St., Ravenna • 723-6562
Open Mon. -Fri., 9-6, and Sat., 9-5

- Dutch Craft Amish-Made Bedding
- New Bedroom Suites
- New Living Room Suites
- New Recliners & Lift Chairs
- We do Special Orders
- Tables & Chairs

Free Delivery & Set Up
12 Months Same As Cash*
*With Approved Credit



Wishing Well®

3	8	4	2	6	4	3	7	2	5	7	4	2
S	P	F	C	A	I	E	J	O	D	O	N	N
3	2	5	7	6	7	5	8	7	4	6	3	5
R	Q	O	Y	N	F	N	L	R	I	A	V	O
7	5	4	3	4	5	3	8	6	8	7	3	6
O	T	S	E	H	G	O	A	L	Y	M	T	Y
8	2	4	6	4	3	4	8	4	2	4	3	8
H	U	P	Z	R	H	O	A	J	E	E	E	R
6	7	6	2	6	8	4	6	8	4	6	5	3
E	H	F	S	E	D	C	E	W	T	L	I	R
8	2	3	8	6	5	7	8	2	6	5	7	2
O	T	S	R	I	V	U	K	M	N	E	M	A
8	5	6	2	5	2	4	8	6	8	7	8	7
H	U	G	D	P	E	S	A	S	R	O	D	R

HERE IS A PLEASANT LITTLE GAME that will give you a message every day. It's a numerical puzzle designed to spell out your fortune. Count the letters in your first name. If the number of letters is 6 or more, subtract 4. If the number is less than 6, add 3. The result is your key number. Start at the upper left-hand corner and check one of your key numbers, left to right. Then read the message the letters under the checked figures give you.

©2017 King Features Syndicate, Inc. All rights reserved.

CryptoQuip

This is a simple substitution cipher in which each letter used stands for another. If you think that X equals O, it will equal O throughout the puzzle. Solution is accomplished by trial and error.

Clue: D equals B
G R P M Y H N C J J A M G D P B J R P Z A D P L V
H C J K G O A Y G O U O G C Z P M K C R
W N P W A N J V U P B O L D A J C J O A L
"O C A M P M Z A."

© 2017 King Features Synd., Inc.
CryptoQuip puzzles \$3.50 • 24 Volumes • Order at: rbmamall.com

CryptoQuote

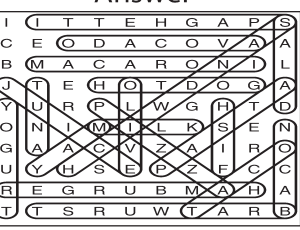
AXYDLBAAXR is LONGFELLOW
One letter stands for another. In this sample, A is used for the three L's, X for the two O's, etc. Single letters, apostrophes, the length and formation of the words are all hints. Each week the code letters are different.

Q Z M E M U I G A F F S S M G Y Q F
L M I G U S T F E L Y D I Z U R A , U T
F R M B G R S F U Q G Q Q Z M
V E F V M E W F W M R Q .
— F I B G E K U Y S M

©2016 King Features Synd., Inc.
New! CryptoQuote puzzles \$3.50 • 6 Volumes • Order at: rbmamall.com

Puzzle Answers January 4, 2017

Puzzles4Kids Answer

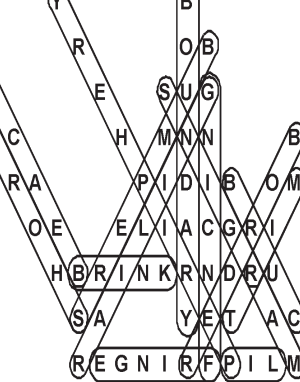


Riddle Answer: Ice-bergers.

Letter Box Solution

S	I	N	G	L	E	O	U	T
G	E	U	O	N	T	S	L	I
T	O	L	I	S	U	E	G	N
N	G	E	T	U	L	I	O	S
L	T	S	N	I	O	U	E	G
I	U	O	E	G	S	N	T	L
U	L	T	S	O	N	G	I	E
E	S	I	U	T	G	L	N	O
O	N	G	L	E	I	T	S	U

ON THE EDGE



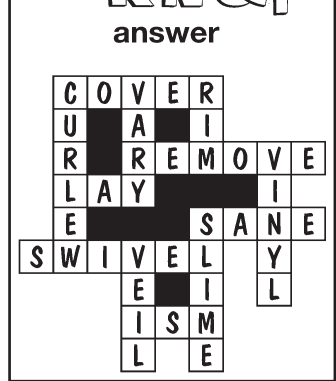
CryptoQuip answer

A song written about somebody with a legal claim on his property could be titled "Lien On Me."

CryptoQuote answer

There is a good deal to be said for blushing, if one can do it at the proper moment. — Oscar Wilde

FEAR & KNIGHT answer



Even Exchange answers

- Waiver, Waiver
- Solve, Salve
- Quilt, Quiet
- Oolong, Oblong
- Alien, Allen
- Notion, Motion
- Stitch, Snitch
- Debit, Debut
- Carlton, Carbon
- Doris, Dorms

Weekly SUDOKU Answer

4	6	1	3	9	5	8	7	2
9	5	7	2	8	1	6	4	3
3	2	8	6	4	7	5	1	9
8	3	4	1	5	2	7	9	6
5	7	6	8	3	9	1	2	4
2	1	9	7	6	4	3	5	8
7	4	3	9	1	8	2	6	5
6	9	2	5	7	3	4	8	1
1	8	5	4	2	6	9	3	7

King Crossword Answers

Solution time: 24 mins.

S	L	A	P	L	A	S	H	P	A	T	
P	A	I	R	E	C	H	O	H	U	B	
I	N	D	O	E	R	A	T	I	T	S	
N	E	S	T	W	E	B	C	L	O	P	
E	R	A	B	R	O						
S	L	U	S	H	Y	Y	O	N	D	E	R
K	I	T	T	Y	U	T	I	L	E		
I	B	E	A	M	S	K	N	E	E	L	S
N	E	T	I	D	S						
B	E	N	T	I	L	L	T	A	R	A	
R	U	E	F	O	R	A	L	A	G	O	G
A	R	E	F	U	M	E	N	U	D	E	
G	O	D	A	P	E	R	T	E	E	S	

Bible Trivia Answers

Now available by Wilson Casey! 2017 Bible Trivia box calendar loaded with daily teasers.

ANSWERS: (1) Old; (2) Azur; (3) Nebuchadnezzar; (4) Paul; (5) Wine; (6) Azur