Livestock Owners: Prussic Acid Caution

Eric Baker
Estill County Extension Agent for Agriculture & Natural Resources

With cool weather finally appearing, livestock producers need to beware of the potential of prussic acid poisoning after a frost. Certain plants, such as johnsongrass, sudangrass, and sorghum/sudangrass hybrids contain cyanide-producing compounds that are released with frost damage to the plant. The amount of the compound in a plant depends on one or more factors including the size and variety of the plant, whether drought conditions are present, and the extent of physical damage caused by frost. When an animal eats plants containing high levels of the compounds, prussic acid poisoning results. Prussic acid interferes with oxygen utilization.

University of Kentucky Extension Forage Specialists and Ruminant Veterinarian have developed several tips to reduce prussic acid poisoning in livestock: 1) Frost/freezing is especially dangerous because the plant cells actually rupture allowing prussic acid to be released. Do not graze until well after the entire plant and new shoots are killed and have turned brown (dry). New forage growth following drought or frost is dangerously high in prussic acid. Wait at least 7 days after a killing frost to allow the cyanide to dissipate; 2) Leaves produce much more prussic acid than stems, especially young upper leaves. New shoots often contain high concentrations of prussic acid. Never graze sorghums or sorghum-cross plants less than 15 inches tall ("knee high") to significantly reduce the potential for poisoning; 3) Feed hungry cattle hay or grain before allowing them to graze forages which may contain prussic acid therefore reducing the amount consumed. Do not graze at night when frost is likely; 4) Drought increases the chance for prussic acid because slowed growth and the inability of the plant to mature favors the formation of cyanogenic compounds in the leaves; 5) Do not graze until 2 weeks after a non-killing frost; 6) Plants grown in high nitrogen soil (and low in phosphorus and potassium) tend to have more prussic acid potential. Splitting nitrogen applications will reduce the risk of toxicity. Herbicides such as 2,4 D can also increase prussic acid for several weeks following application; 7) Chopping or ensiling plants high in prussic acid will reduce toxin levels if properly cured. However dangerous levels of prussic acid may remain if extremely high before cutting. If in doubt, analyze suspect forages before feeding; 8) Johnson grass and sorghum-sudan grass hybrids also have the potential for nitrate accumulation, especially during drought conditions. Nitrate tends to accumulate in the lower stem, so cutting hay very short, or overgrazing so that cattle have to eat the lower stem bases (the "stubble") can cause more intake of nitrate and signs similar to prussic acid poisoning. Nitrates can persist even in hay; 9) If you cut Johnson grass or sorghum-sudangrass for hay, it is safe from prussic acid poisoning because the hay curing process neutralizes any prussic acid; and 10) Wild cherry leaves contain the cyanide compounds. Do not allow access to wild cherry leaves whether they are wilted or not. After storms always check pastures for fallen limbs.

For more information, contact the Estill County Extension office at 723-4557. Educational programs of the Cooperative Extension Service serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expressions, pregnancy, marital status, genetic information, age, veteran status, or physical or mental disability.

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Wishing Well®

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

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.

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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.

NQL EH OSDGKQAD MK

BHXOGAGNSD LH KLGEFMET

QOHE LVD UGELGTD TAHQEF

HJ LAQLV. — JAGEBMK NGBHE

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Farming News

KENTUCKY BEEF CONFERENCE OCT. 21

The 2019 Kentucky Beef Conference is scheduled for Monday, October 21st at the Fayette County Extension office, off Red Mile Road (behind Central Equipment). Registration begins at 9:00 a.m. and the program runs 10:00 a.m. to 3:00 p.m.

This year's conference will cover cattle marketing strategies and market trends, nutrition during drought, water issues during drought, animal disease traceability update, and confinement feeding options for winter feeding.

Registration is $10.00 per person to cover cost of a buffet lunch and refreshments. You will pay at the door but please register with us by October 18th so enough food will be prepared. Our office phone number is 723-4557.

HEART OF AMERICA GRAZING CONFERENCE

The Heart of America Grazing Conference is October 30th in Burlington, KY (Boone County). The theme is "Kicking the Hay habit: Optimizing Profitability".

The keynote speaker is Jim Gerrish, independent grazing lands consultant providing services to farmers and ranchers on both private and public lands across five continents. He conducted 22 years of beef-forage systems research and outreach while on the faculty of the University of Missouri-Forage Systems Research Center (FSRC). His research encompassed many aspects of plant-soil-animal interactions and provided the foundation for many of the basic principles of Management-Intensive Grazing. Jim is a gifted speaker, author, scientist and pasture ecologist.

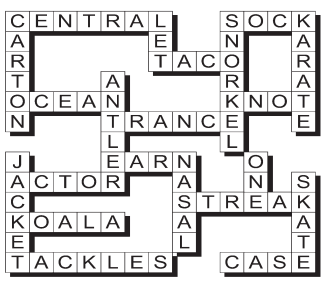
Registration can be paid online at the following site: https://2019hoa.eventbrite.com or call the Extension office for details.

Puzzle Answers

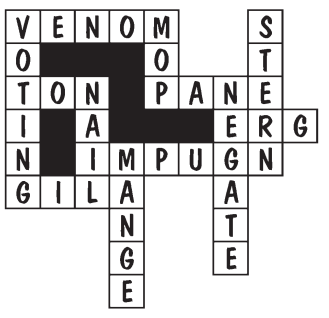
October 16, 2019

Puzzles4Kids

Answer



FEAR KNOT answer



Letter Box

Solution

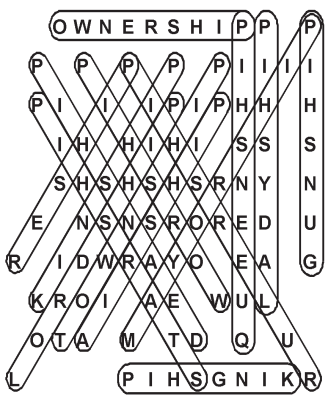
E	T	G	R	A	D	I	L	M
I	L	D	G	E	M	A	T	R
R	M	A	L	I	T	D	G	E
G	A	M	D	R	L	T	E	I
D	I	E	T	G	A	M	R	L
T	R	L	I	M	E	G	D	A
L	D	I	M	T	R	E	A	G
M	E	T	A	L	G	R	I	D
A	G	R	E	D	I	L	M	T

Even Exchange

answers

1. Kernel, Kennel
2. Beast, Feast
3. Summit, Submit
4. Puddle, Paddle
5. Reach, React
6. Whole, Whale
7. Gallon, Fallon
8. Apple, Ample
9. Shack, Shark
10. Oldest, Oddest

SHIPS THAT DON'T FLOAT



Weekly SUDOKU

Answer

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

King Crossword

Answers

Solution time: 25 mins.

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

CryptoQuip

answer

If you shorten the length of a casual red-and-green shirt, are you trimming the Christmas tee?

CryptoQuote

answer

But no pleasure is comparable to standing upon the vantage ground of truth. — Francis Bacon

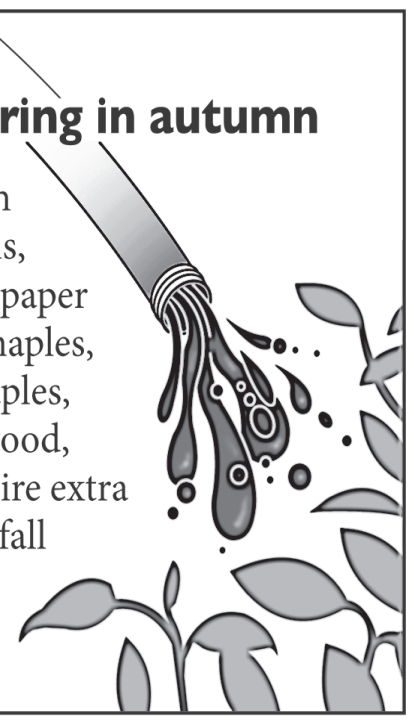
Bible Trivia Answers

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

ANSWERS 1) New; 2) Ruth; 3) Sackcloth; 4) Zebedee; 5) Beth-peor; 6) Nathan

The Garden Bug

Watering in autumn



Woody plants with shallow root systems, such as European white birches, paper birches, Norway maples, silver maples, red maples, Rocky Mountain maples, lindens, alder, hornbeams, dogwood, willows, and mountain ash, require extra watering when there is little rainfall during the fall months. — *B. Weaver*

Source: www.ext.colostate.edu

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Birding BITS

BY Cindy Brook

Fall Migration!

You never know who might show up.

Four things to have on hand:

1. Feeders for finches filled with thistle seed.
2. White millet tossed on the ground for sparrows and buntings.
3. Fruits and berries for orioles and gray catbirds.
4. Fresh water for all the birds!

E-mail: birdingbits@cfl.rr.com

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Stickeler's Puzzle

STICKELERS [sic].
by Terry Stickels

If X^2 is larger than 4, which of the following is true?

A. X is greater than 0, 1 or 2.
B. At least one root is zero.
C. X^3 is greater than 4.
D. X + 1 is always positive.
E. $2X^2 + 2$ can never be negative.

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Stickeler's Answer on Page 11

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