

# Livestock Owners Prussic Acid Caution



**Eric Baker**  
Estill County Extension  
Agent for Agriculture  
& Natural Resources

With cool weather in the forecast, 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.

UK Extension Forage Specialists and Ruminant Veterinarian have devel-

oped 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

two 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-sudangrass 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.

## ELITE BRED HEIFER SALE

The Bourbon County Livestock Improvement Association will hold their 30th Annual Elite Bred Heifer Sale on Monday, November 2, 2020 at the Paris Stockyards, located at US Hwy 68 North in Paris. Inspection will be held from 1:00-5:00 p.m. with the sale to begin at 6:00 p.m. A virtual sale option will be available and information is located on the website at [www.eliteheifer.com](http://www.eliteheifer.com) where a link for required paperwork to be completed prior to the sale in order to bid online. Contact the Bourbon County Extension office at 859-987-1895 for more information.

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## Wishing Well®

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

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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## 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: J equals D

CX PRRMLHPCM EMPT PVXSC P RXY  
FPTLMGC, VSRV ZTXYMTG ZPLM P  
GPCPCM-XE-CFM-XIHXI PJJTMGG.

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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.

EWDKD FI LZEWFLV RFCD  
KDEJKLFLV EZ Y ORYBD EWYE  
KDXFYLI JLBWYLVDM EZ AFLM  
EWD UYNI FL UWFBW NZJ  
NZJKIDRA WYSD YREDKDM.  
— LDRIZL XYLMDRY

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## Puzzle Answers September 30, 2020

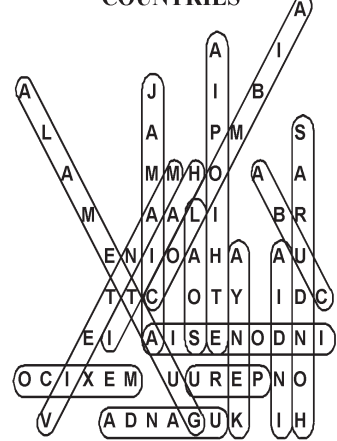
### Puzzles4Kids

Answer

What is black and white  
and red all over?

A sunburned penguin.

### COFFEE-EXPORTING COUNTRIES

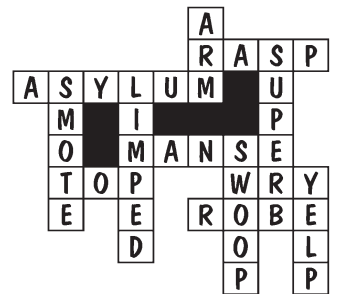


### Letter Box

Solution

I	E	H	U	A	O	T	R	Z
T	R	U	Z	H	I	O	E	A
Z	O	A	R	E	T	H	I	U
U	T	E	O	Z	H	R	A	I
R	H	I	A	T	E	Z	U	O
O	A	Z	I	R	U	E	T	H
E	I	O	T	U	Z	A	H	R
H	Z	R	E	I	A	U	O	T
A	U	T	H	O	R	I	Z	E

### FEAR & KNIGHT answer



### Even Exchange answers

- Middle, Muddle
- Pleat, Plead
- Smear, Swear
- Alter, After
- Proper, Propel
- Bacon, Baton
- Design, Resign
- Crush, Brush
- Amber, Ember
- Brandy, Brando

### King Crossword Answers

Solution time: 27 mins.



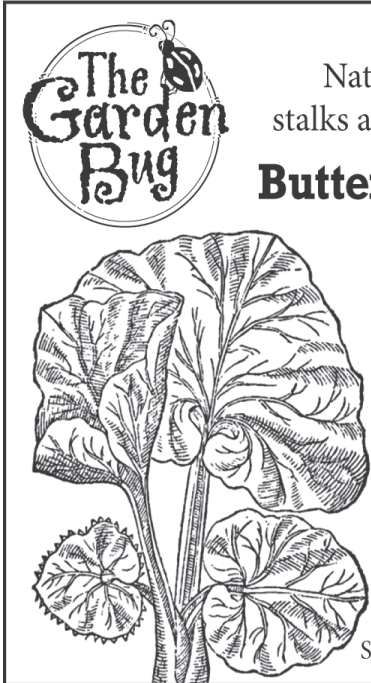
### Weekly SUDOKU Answer

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

### Bible Trivia Answers

"Test Your Bible Knowledge," with 1,206 multiple-choice questions by columnist Wilson Casey, is available in bookstores and online.

ANSWERS (1) Neither; (2) Ahaz; (3) Leah; (4) Ahaz; (5) Gamaliel; (6) Rachel



Native to Korea, China and Japan, where its stalks are eaten as vegetables, this plant is easily grown in shady areas where the soil is moist, such as along the banks of bogs, ponds, streams or water gardens. If it is grown in full sun, its leaves will wilt on hot days. Also known as *sweet coltsfoot*, its fragrant, yellowish-white flowers appear in spring before the leaves appear. Its leaves were once used to wrap butter in hot weather, hence its name.

- Brenda Weaver

Source: [www.missouribotanicalgarden.org](http://www.missouribotanicalgarden.org)



**Birding BITS** BY Cindy Brook  
*Twilight Feeding*  
After I bring my feeders in for the night, I like to toss millet on the ground near brush cover. This gives the birds a last chance to fill up before it gets dark. Cardinals always come, and so do brown thrashers and doves. It's a very peaceful setting.

E-mail: [birdingbits@cfl.rr.com](mailto:birdingbits@cfl.rr.com)  
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## Stickeler's Answer

### Stickelers Answer

The number on the left is the largest, and the number on the right is the second largest.

9	8
8	9
7	7
6	6

### Stickeler's Puzzle on Page 7

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## Puzzle Answers

### BIBLE WORD SEARCH

Answers

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

state-of-the-union address  
harvest, but growers gave a low  
To alleviate fear about a low  
answer  
**Cryptoquip**

— Nelson Mandela  
the ways in which you  
remains unchanged to find  
returning to a place that  
There is nothing like  
answer  
**Cryptoquote**

### Bible Word Search on Page 7

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