



**Eric Baker**  
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With cooler weather around the corner, 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

# Livestock Producers Beware!

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 be-

cause 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/sorghum-sudangrass for hay, it is safe 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.

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**UK COOPERATIVE EXTENSION SERVICE**  
University of Kentucky - College of Agriculture  
**Estill County**  
Family & Consumer Sciences  
**Chelsea K. Bicknell**  
Estill County Extension Office

**Monday, October 19th @ 12:00 Noon**  
**Lightbulb Shopping Made Simple**

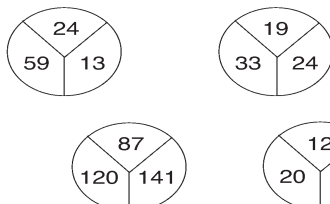
Standing in the store's lighting aisle can be confusing if not overwhelming. Armed with less than an electrical engineer background, the simple light bulb decision has quickly evolved into a shelf-side research project ending in a startling price analysis. Once you crack the code, only then can you focus on what really matters - how much you're willing to spend and how bright a bulb you need. Would you like to learn the truthful facts amidst misleading advertisements and company profit motives? If you are looking for direction when replacing that burned out 60 watt incandescent, join UK Extension Associate for Residential Energy, Gerald Hash, and Family and Consumer Sciences Extension Agent, Diana Doggett, at The Best and Brightest Home Lighting workshop on October 19 at 12:00 Noon at the Estill County Cooperative Office, 76 Golden Court, Irvine, KY. This program is free of charge and will help consumers become better informed but not overwhelmed regarding the battle of the bulbs. Contact 606-723-4557 for additional information.

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## Stickeler's Puzzle

**STICKELERS** (sic)  
by Terry Stickels

There is a certain logic in the placement of the numbers in the circles below. See if you can determine that relationship and find the missing number in the last circle.



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**Stickeler's Answer on Page 11**

## Community News

**Thursday, October 29th**

### Trick-R-Treat Trot

In order to create another successful community event, the ECHS Future Business Leaders of America would like to partner with local churches, business and civic organizations to create another great night of Community Trick ~R~ Treating that is safe for all children. We invite you to set up booths, or chairs and hand out Halloween candy or prizes to kids.

If you would like to set up a booth, you will need to provide your own table, candy and/or prizes. If you do not want to set up a booth, you are welcome to bring chairs for handing out your goodies. This year the dress up theme will be "America the BOOTiful". Please come dressed patriotically and have fun as we keep our kids safe. We hope you will join us this year! Location is on Broadway in Irvine, beside US Bank.

**Things to Know:**  
Register by October 27, 2015  
Set up by 4:45 p.m. on Thursday, October 29th  
Bring your own chairs and booth set up  
Bring individual pre-packaged candy ONLY  
Please come dressed in costume  
For more information please contact Paula Short at 606- 723-3537 or mail registration by 10/23/2015 to: Paula Short, ECHS, 397 Engineer Road, Irvine, KY 40336. A registration form will be on The Estill County Tribune's website <www.estilltribune.com> asap.

**Wishing Well**  
2 3 6 3 6 7 8 4 6 7 8 7 4  
S A H S A A Y L V G O R E  
5 3 8 4 2 8 7 5 3 7 3 2 3  
A P U T E S E N L E E C N  
8 7 5 4 8 2 3 5 7 6 4 6 4  
U A E T R U D W B E E F R  
8 4 8 6 4 7 8 4 2 8 3 7 8  
V A I I R L V R R E I E C  
2 8 2 4 6 7 4 5 2 7 4 2 8  
E R I I R F V P N R E L I  
3 2 8 4 7 3 7 8 7 2 3 2 6  
D I S S I I E I N F D E M  
7 8 3 7 3 6 5 6 5 6 5 6 5  
D S E S A W R I I L Z L E  
**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: P equals Y  
OSR YNOSRYNOZHNG SNF N  
LRNCCP TGLRNCZIOZH SJVR. Z  
LRHBJG PJT HJTCF HNCC ZO  
"VZ ZG OSR IBP."  
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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.  
CEPMY SEP EJGY MPHY  
HYJTM CEKTN CEY HPMC  
KHZPACJTC CEKTD KT CEY  
SPAQU KM QPGY. CEY ZPPA  
NTPS KC KM HPTYX.  
- DYAJQU IAYTJT  
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## Puzzle Answers

October 7, 2015

**Puzzles4Kids**  
Answer  
  
Riddle Answer:  
The Henpire State Building.

**Letter Box**  
Solution  

A	R	H	M	E	N	C	T	P
N	P	M	T	R	C	H	A	E
C	T	E	H	A	P	N	R	M
E	C	A	R	P	H	T	M	N
T	H	P	N	M	A	R	E	C
R	M	N	E	C	T	A	P	H
P	A	R	C	H	M	E	N	T
H	E	T	P	N	R	M	C	A
M	N	C	A	T	E	P	H	R

**Animals in Words**

**CryptoQuote**  
answer  
Those who have some means think the most important thing in the world is love. The poor know it is money.  
- Gerald Brennan

**CryptoQuote**  
answer  
Those who have some means think the most important thing in the world is love. The poor know it is money.  
- Gerald Brennan

**Bible Trivia Answers**  
Casey's trivia book "Know It? ... or Not?" is available from BearManorMedia.com

**FEAR & KNOT**  
answer

**Even Exchange**  
answers  
1. Gallon, Gallop 6. Mumble, Fumble  
2. Shock, Spock 7. Expand, Expend  
3. Perch, Perth 8. Quiet, Quilt  
4. Nickel, Nicked 9. Shawl, Shall  
5. Safer, Saber 10. Devour, Detour

**Weekly SUDOKU**  
Answer  

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

**King Crossword**  
Answers  
Solution time: 24 mins.  

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

**Do Not Judge**  
**Matthew 7:3-6**  
See also, Luke 6:37-42 & Romans 14:1-12  
*3And why beholdest thou the mote that is in thy brother's eye, but considerest not the beam that is in thine own eye? 4Or how wilt thou say to thy brother, Let me pull out the mote out of thine eye; and, behold, a beam is in thine own eye? 5Thou hypocrite, first cast out the beam out of thine own eye; and then shalt thou see clearly to cast out the mote out of thy brother's eye. 6Give not that which is holy unto the dogs, neither cast ye your pearls before swine, lest they trample them under their feet, and turn again and rend you.*  
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