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Estill County Extension  
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## Renovating Pastures And Hayfields With Clover

content. The result is improved animal performance. Research has shown that legumes improve animal growth rates, reproductive efficiency, and milk production.

Another benefit of legumes is nitrogen fixation. Legumes get their nitrogen from symbiotic bacteria that live in "knots" (nodules) on their roots. These bacteria are added when legume seed is inoculated. This "fixed" nitrogen provides the nitrogen needed by the legumes and also by grasses growing with them. Different legumes are able to "fix" different amounts of nitrogen. Alfalfa usually fixes the most at 200-300 pounds/acre/year, while annual lespedeza is on the low side with about 75 pounds. Clovers can fix 100-200 pounds of nitrogen per acre per year. The value of the nitrogen fixed by legumes depends on the cost of nitrogen fertilizer. With today's nitrogen prices, savings are significant.

The final benefit of adding clovers is more summer growth. Most of the growth of cool-season grasses occurs during the spring and fall. Legumes make more growth during the summer

months than cool-season grasses. Growing grasses and legumes together improves the seasonal distribution of forages and summer forage yield.

Follow these six important steps when renovating grass fields with legumes: 1) soil test and apply the needed lime and fertilizer (do not use nitrogen since it will stimulate grass competition), 2) reduce the vegetative cover on the soil by heavy grazing in late fall and early winter to get the seed in contact with the soil, 3) select the clover to be used (red, ladino, or a combination), 4) use certified seed at the proper rate (red clover at 6-12 pounds/acre, ladino clover at 1-3 pounds/acre, or a mixture of red clover 4-6 pounds/acre and ladino clover at 1-2 pounds), 5) plant the seed so that it makes good contact with the soil (either disk to disturb 40 to 60 percent of the sod for planting clovers, use a no-till seeder, or frost seed the clover on the soil surface in mid-February), and 6) control grass and weed competition by flash grazing or mowing until the new legume plants are 3 to 4

inches tall. Once legumes have been established in grass fields, maintaining them is important. To do so, follow an annual fertility program based on soil test recommendations to be sure phosphorus and potassium are available. Take a soil sample at least every third year to check fertility. Again, to avoid too much competition from the grass, do not use any nitrogen as long as you want to keep legumes in the field. Mow pastures as needed to remove grass seed heads and control weeds and woody vegetation. Grass-clover pastures may be grazed all season, but take care to avoid overgrazing. Leave 2 or 3 inches of top growth at all times. A good rotational grazing plan helps. Observe renovated fields often to be sure insect problems are found early.

For more information about renovating pastures and hayfields, contact the Estill County Extension Office at 723-4557.

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

## Wishing Well®

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

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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.

YHN UHMLELFA NVOH BLGT,  
TJTF LG LY RVTE GHLAKYTF  
KTH MY GLHEY.  
— DLWWN EOFRMM

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## Farming News

Monday, February 22nd @ 7pm

### Agritourism Meeting

Farmers, have you considered agritourism for your farm? Have you thought about designing a corn maze, hosting a fall festival, or providing a farm experience for school or church groups? If these ideas interest you, please attend our "Agritourism 101" meeting, Monday, February 22nd at 7 p.m., at the Estill County Extension office, 76 Golden Court, Irvine. Amelia Wilson, KY Department of Agriculture agritourism director, will be our guest speaker. To pre-register, call 723-4557.



**Cowslip** is a herbaceous perennial with upright stems bearing bell-shaped, yellow flowers. It is native to the United Kingdom, but can be found in northeastern sections of North America. It is known commonly by many names such as fairycup, lady's keys, palseywort, primerole and St. Peter's wort.

Detail of *Primula veris humilis*, a woodcut by Carolus Clusius (1526-1609). Sources: plants.usda.gov; rhs.org.uk; www.picturingplants.com

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Prolong your roses

For a quart vase, use 2 tablespoons of dissolved sugar, 2 tablespoons of apple cider vinegar and 1/2 teaspoon of bleach. This will supply adequate levels of sucrose, acidify the water and help keep microbes from growing in your flower vase.

— Brenda Weaver

Source: homeguides.sfgate.com

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## Stickeler's Puzzle

STICKELERS [sic].  
by Terry Stickels

You have 22 blue socks and 24 black socks in a drawer.

If you reach into the drawer without looking at the socks, what is the smallest number of socks you must take from the drawer to be assured of getting one pair of blue socks?

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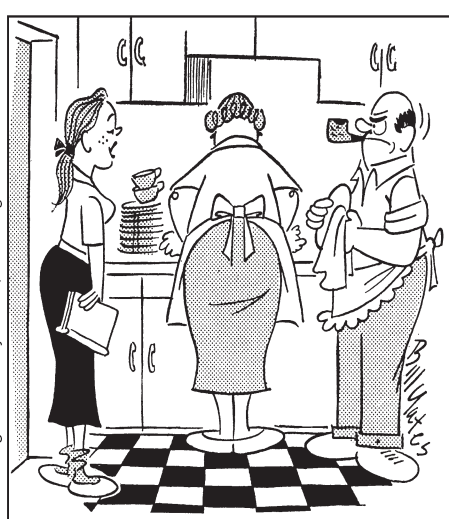
## Stickeler's Answer on Page 11

## SCRAMBLERS

Unscramble the letters within each rectangle to form four ordinary words. Then rearrange the boxed letters to form the mystery word, which will complete the gag!

Deluge	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>WORSHE</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Profuse	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>SIV AHL</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Groan	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>CAKER</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Bewitch	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>ROMANE</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>

TODAY'S WORD



"Mother, when you're through with Daddy, may I use him for my \_\_\_\_\_?"

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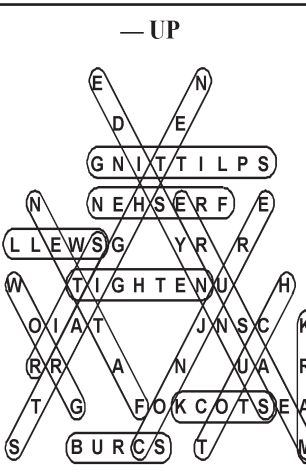
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## Letter Box Solution

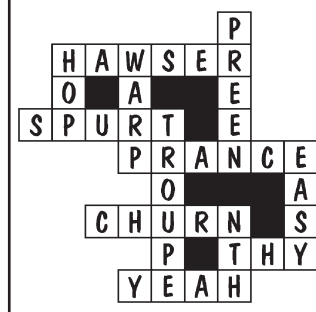
W	H	A	T	I	L	O	V	E
L	I	O	W	E	V	H	A	T
T	V	E	H	O	A	L	W	I
V	W	T	O	H	I	A	E	L
I	E	L	A	V	W	T	H	O
A	O	H	L	T	E	V	I	W
H	L	V	E	W	T	I	O	A
E	T	I	V	A	O	W	L	H
O	A	W	I	L	H	E	T	V



**CryptoQuip**  
answer  
When lambs discover love and become married, could you say their two hearts bleat as one?

**CryptoQuote**  
answer  
Try praising your wife, even if it does frighten her at first.  
— Billy Sunday

## FEAR & KNIGHT answer



What did the cat say to his Valentine?

You are purr-fect for me.

## Even Exchange

- Donna M. Pettman
- |                   |                   |
|-------------------|-------------------|
| 1. Oblong, Oolong | 6. Prince, Prance |
| 2. Tower, Power   | 7. Rivers, Rivera |
| 3. Matter, Mutter | 8. Horde, Horse   |
| 4. Adapt, Adopt   | 9. Thread, Threat |
| 5. Grime, Gripe   | 10. Stowe, Stone  |

## Weekly SUDOKU

Answer

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

## King Crossword

Answers  
Solution time: 24 mins.

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

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

thians; (5) Samson; (6) Saul  
Mark; (3) Esther 8:9; (4) 1 Corin-  
ANSWERS (1) Old; (2)