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Renovating Hay & Pasture Fields

nutrient content, resulting in improved animal performance. Research studies have shown that legumes improve animal growth rates, reproductive efficiency and milk production. Legumes also add, or "fix," nitrogen in grass pastures and hayfields.

Inoculating seed adds symbiotic bacteria that live in "knots" on plant roots and fix nitrogen the grasses and legumes need. Different legumes are able to fix varying amounts of nitrogen. Alfalfa usually fixes the most, about 200 pounds per acre, while annual lespedeza fixes less, about 75 pounds. Legumes make more growth during the summer than cool-season grasses. Growing grasses and legumes together increases summer growth.

When renovating grass fields with legumes, have the soil tested and apply the recommended lime and fertilizer. Legumes need higher soil pH and fertility levels than grasses. Do not add nitrogen because it stimulates grasses, increasing competition with legumes. Reduce vegetative cover on the soil to make it easier for legume seed to make contact with the soil. The best way is to allow heavy grazing during early winter. You also can use herbicides to kill or suppress grass to help control competition. Be sure to follow the herbicide label directions for rates and grazing restrictions.

Select legumes based on the soil and your planned use of the forage. For hay, alfalfa or red clover usually

is best. A red clover-ladino clover combination works well for both hay and grazing. Ladino clover, red clover and/or annual lespedeza are good choices for pastures. Select certified seed varieties that perform well in your geographic area. Also, be sure to mix a high-quality inoculant with seed just before planting. Apply a sticking agent to be sure the inoculant sticks to the seed.

Be sure seed makes good contact with the soil. One of the best ways to do this is to use a no-till drill. Another method is to use a disk, field cultivator or field tiller. Tillage helps expose the soil so legumes have a better chance to germinate and grow. When planting clovers, loosen 40 to 60 percent of the sod. For alfalfa seeding, almost all sod should be loosened from the soil.

A simple, effective technique is to broadcast legume seed on the soil surface in late winter, generally Feb. 15 to March 15. Soil freezing and thawing covers the seed. This method doesn't work well with alfalfa seed.

Controlling grass and weed competition is one of the most critical practices for successful renovation. Many attempts have failed

because grass was allowed to grow and reduce the light, nutrients and water available to young legume plants. Keep grass short by grazing or mowing until legume plants are 3 to 4 inches tall. Stop grazing and mowing for several weeks so legumes will become well established. Afterwards, mow or graze the field on a schedule to keep legumes in good condition.

Once legumes are established, use soil test recommendations as the basis for the fertility program. Take soil samples every third year to check fertilizer and lime needs. To avoid grass competition, don't use any nitrogen while you have legumes in the field.

Mow pastures when needed to remove grass seed heads and control weeds and woody vegetation. Scout renovated fields regularly to discover insect problems early.

Contact the Estill County Cooperative Extension Service at 723-4557 for additional information on successful pasture renovation.

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

Wishing Well®

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

MNJW CDGJPDYA CFAC "VNEC
IJWUEU IDEWV EC GTON VDD
CNFKI," MDTUY VNFV PJ F
DEWVJY OKEVEOECG?

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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.

IXX NKV CVM NVLXH NYS
JLUQ UKIWZ YQ
— KIBBYSZUU NIU EVWS I
QNYS. — XVWH EMVVS

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Puzzle Answers

December 30, 2015

Puzzles4Kids

Answer

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G | O | O | J | O | B | Y | I | K | E | S | | |
| E | E | H | B | A | H | W | E | L | C | O | M | E |
| W | H | I | O | O | H | O | T | T | I | A | D | A |
| I | Z | O | W | I | E | A | T | H | A | N | K | S |
| H | A | B | V | E | B | Y | E | T | E | | | |
| O | O | L | A | T | E | R | K | G | A | D | Y | O |
| K | E | E | P | O | F | F | | | | S | H | O |

Letter Box

Solution

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| N | R | E | Z | I | T | P | O | A |
| P | A | T | R | O | N | I | Z | E |
| Z | O | I | A | P | E | N | R | T |
| E | P | A | I | T | R | Z | N | O |
| R | T | O | N | E | Z | A | P | I |
| I | Z | N | P | A | O | T | E | R |
| A | N | Z | E | R | I | O | T | P |
| T | I | R | O | N | P | E | A | Z |
| O | E | P | T | Z | A | R | I | N |

FEAR & KNIGHT

answer

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| A | L | L | O | W | | | | |
| L | | | W | | | | | |
| M | O | D | E | | | | | |
| O | S | O | L | A | R | N | A | |
| T | | | M | Y | R | I | A | D |
| | | | I | | | | G | |
| | | | D | O | O | M | | |
| | | | | | | | A | |

Even Exchange

Donna M. Pettman

1. Brave, Bravo
2. Marine, Marina
3. Lefty, Lofly
4. Kitten, Mitten
5. Heard, Heart
6. Random, Ransom
7. Order, Odder
8. Flight, Fright
9. Maine, Maize
10. Crook, Croak

Weekly SUDOKU

Answer

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

King Crossword

Answers

Solution time: 24 mins.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | D | D | U | P | P | O | S | S | U | M | |
| Q | U | A | R | T | O | A | R | O | U | S | |
| U | N | D | I | E | S | C | A | P | P | E | |
| A | T | O | P | S | U | E | T | E | R | E | |
| | S | P | I | T | E | R | R | | | | |
| E | M | S | I | B | I | D | O | M | A | R | |
| M | I | C | H | E | L | L | E | O | B | A | M |
| T | R | I | O | Y | T | I | P | S | N | I | P |
| | S | P | A | T | R | O | T | | | | |
| S | I | S | G | O | Y | A | H | O | B | O | |
| A | D | O | R | E | D | V | A | R | L | E | T |
| G | E | R | U | N | D | E | Y | E | L | E | T |
| A | S | S | E | T | S | D | E | W | A | R | |

Bible Trivia Answers

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

ANSWERS (1) NEI-ther; (2) Spears; (3) Lazarus; (4) Sarah; (5) Rachel; (6) Rest

The Garden Bug

Wishing tree traditions
At the famous Wishing Tree of Lam Tsuen (near Hong Kong, China), wishes are written on "lucky" papers, rolled up, then tied up with red string and attached to an orange for weight. All are tossed into the tree; if they catch in the branches, the wishes are said to then come true. "Wishing trees" can be found in many cultures throughout the world. - Brenda Weaver
Source: www.greenfield-thong.com

Stickeler's Puzzle

STICKELERS [sic].
by Terry Stickels

Here's an interesting question:
You may know that a glazier works with glass, a blacksmith with iron, a currier with leather and a sawyer with wood (timber).
Can you tell me what a brazier does?

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Stickeler's Answer on Page 11

Community News

Thursday, January 14th @ 6:30pm

Farmers Market Seminar

The Estill County Extension Service will host a farmer's market seminar on Thursday, January 14th, 6:30 p.m., at the Extension office. Sharon Spencer of the Kentucky Department of Agriculture will be our speaker and discuss selling at farmers markets and ways to help the local market grow. To pre-register, please call 723-4557.

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"He refuses to make a house call ... and to think of how we sacrificed to send him to _____ school."

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!

Secure
TABLES

Blur
MARES

Forgo
BASTIAN

Prompt
DUNCIE

TODAY'S WORD