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According to UK Extension weed specialist J.D. Green, Nodding thistle (*Carduus nutans*) is the most widespread thistle species found in Kentucky. Its name describes the large flowers because they bend over and appear to nod or droop. Musk Thistle is another common name for this plant. Like other weeds, nodding thistle lowers the productivity of pastures. Also, the plant discourages livestock from grazing close by because of its spiny nature. An understanding of the nodding thistle's growth and life cycle is useful for controlling it.

The plant is easiest to identify when it is in the flowering stage. Nodding thistle produces a red to purplish flower about 2 inches in diameter. The flower is attached to an erect stem that can be 3 to 6 ft tall and the flower frequently droops or nods. The plant's lower portion is branched with 1 to 3 flowers per branch. Large plants are capable of producing 50 or more flowers. Nodding thistle, like other biennial plants, usually requires 2 years to complete its life cycle. However, it can develop as an annual or winter annual depending on environmental conditions. Its only method of reproduction is by seed. Seed germinate in the fall or early spring and the seedling forms a rosette. The rosette is a circular cluster of leaves with the growing point close to the ground. A young rosette can range from 4 to 8 inches in diameter. The plant remains in the rosette stage throughout its first year of growth. The second spring after emergence, the rosette size increases to about 12 to 18 inches across,

Nodding Thistle Control In Grasses

the stem begins to elongate and flower stalks develop. Flowers begin to form in late May to early June. One reason nodding thistle can be difficult to control is that one plant can produce several thousand seed. A large, mature plant produces over 4,000 seed that can become new plants next year. Some of the seed remain viable for at least 10 years. Also, the seed are easily carried or spread by wind, water, animals, farm equipment and in hay. Since nodding thistle only reproduces by seed, effective control programs depend on preventing seed production and spread.

Nodding thistle becomes easily established on areas with bare or exposed soil. It is frequently found in overgrazed pastures, areas with poor fertility and disturbed sites. Under these conditions, desirable grasses are unable to grow vigorously and compete effectively against this weed's emergence and growth. A control program for nodding thistle should involve good management practices that will help establish and maintain productive pastures. These practices include maintaining good soil fertility and proper soil pH and managing pastures to prevent overgrazing. It is also important to avoid the spread of nodding thistle seed by keeping fence rows and adjacent lots weed-free and by preventing transport of seed by farm equipment. Mechanical methods for control consist of mowing or hand removal. These methods may not eliminate this weed problem but should reduce seed production. With mechanical controls the plant should be mowed or removed as close to the ground as possible before it begins to flower. Some regrowth will probably occur, but seed production will be noticeably less than if no mechanical control practices were used.

The optimum time for nodding thistle control with herbicides is while the plant is in the rosette stage. Apply herbicides in the spring during late March or early April before thistles produce a flower stalk. A fall application in late September, October or early November will also kill many of the rosettes of first-year plants.

Herbicide treatment may need to be repeated the following spring. The rosette must be actively growing for effective control. Plants absorb more herbicide and move it to the roots when soil moisture conditions are good and air temperatures are above 50 degrees F for several days. Applying herbicides after flower stalks begin to elongate can result in inconsistent control.

Herbicides that can be used in grass pastures include the 2,4-D Amine or 2,4-D Ester formulations, and Banvel. Apply 2,4-D Amine or 2,4-D Ester at 1 to 2 qt/A (i.e. assuming a 2,4-D formulation containing 3.8 lb acid equivalents/gal). Note: when applied at 1 qt/A a 2,4-D formulation containing 3.8 lb ae (acid equivalents)/gal as stated on the label equals approximately 1 lb ae/A of 2,4-D. The lower rate of 2,4-D should be used only at temperatures above 60 F and/or before flower stalk elongation. Use the higher rate when air temperature is 40 to 60 degrees F or after large rosettes develop. Apply Banvel at 1 to 2 pt/A. Good plant coverage with the herbicide is essential for best results. When making broadcast applications use a spray volume of 20 to 40 gal of water/acre and spray pressures less than 40 p.s.i. This spray gallonage and low pressures help provide good spray coverage and also reduce the potential for off-site movement of spray particles. Spot treatment of thistle plants may be adequate on areas containing a few scattered plants and along fence lines. Use a spray mixture of 2 or 3 Tablespoons of 2,4-D concentrate (i.e. assuming a 2,4-D formulation containing 3.8 lb acid equivalents/gal) for each gallon of water. Apply enough to moisten the nodding thistle leaves without run-off. No herbicides are available to control nodding thistle in grass pastures interseeded with legumes such as red clover or alfalfa. A thistle control program in grass-legume mixtures must rely on cultural and mechanical practices.

Precautions Read and understand precautions on the herbicide label before you spray. •Red clover, alfalfa

and lespedeza interseeded in pastures are likely to be killed by 2,4-D or Banvel. •Avoid spray drift and spraying near sensitive crops. Do not spray when spray particles and vapors may be carried by air currents to areas where sensitive crops are growing. Crops sensitive to both 2,4-D and Banvel include tobacco, soybeans and some vegetables. •Do not use spray equipment which has contained 2,4-D or Banvel for spraying other pesticides on susceptible crops. •Check the label for animal grazing restrictions following herbicide use. These restrictions may vary depending on the herbicide used and the amount applied. Most 2,4-D herbicide formulations require a waiting period of 7 to 14 days after application before livestock can graze treated pastures.

Integrating Control Strategies In most situations, no single weed control practice alone will eliminate or maintain thistle-free pastures. Best control comes from an integrated approach using various control strategies. Effective thistle control programs begin with preventing establishment and spread of the weed. In situations where severe nodding thistle problems exist, combine timely chemical controls with pasture improvement. Doing so promotes competitiveness of the desirable forage grasses. A persistent effort for several years is generally required.

For more information on managing weeds, contact the Estill County Cooperative Extension Service at 723-4557.

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Birding BITS BY Cindy Brook

Yellow-Throated Warbler
Primarily a gray bird with black and white markings, these birds are easy to identify by their bright yellow throat. Yellow-throats eat a variety of insects, but can be lured into your yard with sunflower heart chips either tossed on the ground or in a tube feeder with a tray.

E-mail: birdingbits@clrr.com
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Wishing Well®

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

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.

CEG VLB AEN XGCD

EOVDGXU WG WNFGR OD

GZGB VNFG

QNBCGVMCOWXG CELB CEG

WNFG. - DLVPGX WPCXGF

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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: Z equals A

VLMRLJPU ZS Z NZWS-NVVM

BJPMVB, SDRH ZWGRM SDR

NLVU "BVOYM HVO YJGR NYJRW

BJSD SDZS?"

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Puzzle Answers

April 16, 2014

Puzzles4Kids

Answer

Who never gets his hair wet in the shower?

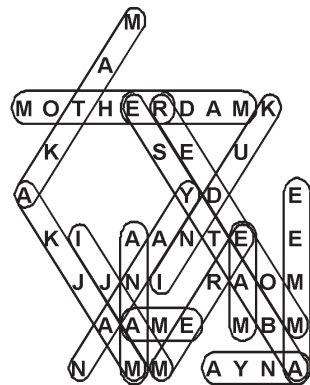
A bald man.

Letter Box

Solution

T	I	O	W	N	H	D	U	S
U	W	H	I	D	S	T	O	N
D	S	N	O	T	U	W	H	I
S	O	U	T	H	W	I	N	D
W	D	T	N	O	I	U	S	H
H	N	I	S	U	D	O	W	T
O	T	S	D	W	N	H	I	U
I	U	W	H	S	T	N	D	O
N	H	D	U	I	O	S	T	W

MOTHER IN VARIOUS LANGUAGES



CryptoQuote

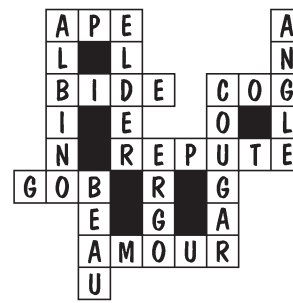
answer
The man who lets himself be bored is even more contemptible than the bore.
- Samuel Butler

CryptoQuip

answer
Ordering at a fast-food window, they asked the frog "Would you like flies with that?"

FEAR & KNIT

answer



Even Exchange

answers

- Maggie, Magpie
- Grant, Giant
- Expand, Expend
- Dreary, Dreamy
- Local, Loyal
- Plato, Pluto
- Former, Forger
- Quirk, Quick
- Order, Odder
- Poise, Posse

Weekly SUDOKU

Answer

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

King Crossword

Answers

Solution time: 21 mins.

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

Bible Trivia Answers

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

ANSWERS: (1) New; (2) Co-bra (Adder); (3) Resist; (4) Matthew; (5) Children; (6) 1

CAST YOUR VOTE FOR CLUSTER HOWARD

STATE REPRESENTATIVE

- Longtime resident of the ninety-first district
- Over thirty years of experience in education
- Proven success with conflict resolution and a team approach to problem solving
- Supporter of veterans and their families
- Positive change and a new approach to politics

VOTE FOR POSITIVE CHANGE

Vote Cluster Howard

91st District State Representative

Paid by Cluster Howard, 151 Pine Hill Drive, Jackson, KY 41339

