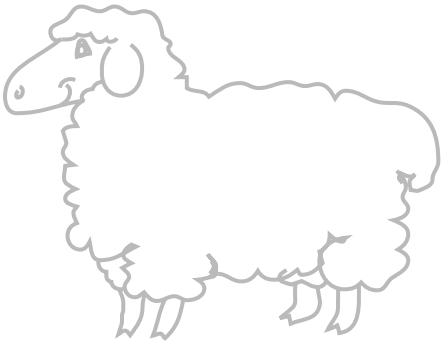
Scoring
30-40 Udderly Awesome
20-29 Not Quite Egg-sell-ant
Under 20 Ewe can do better!

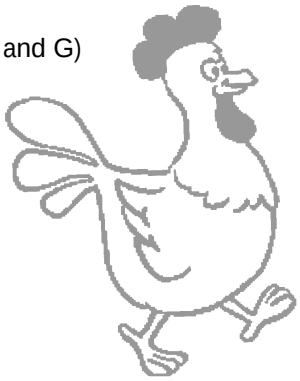
BARNYARD BRUSHUP



1. Which of the following are associated with livestock? (circle all that apply)

(A) Wool
(B) Aquaculture
(C) Biodiesel fuel
(D) Green manure
(E) Whey
(F) Collagen
(G) Scrapie

ANSWER: (A, C, E, F, and G)



2. Rank the following from most to least average pounds consumed per year.

(A) Pork
(B) Eggs
(C) Lamb
(D) Beef
(E) Dairy products
(F) Chicken
(G) Turkey

ANSWER: (E), (D), (F), (A), (B), (G), (C)

3. Some important areas of animal research include… (circle all that apply)

(A) disease resistance
(B) reproductive efficiency
(C) desirable lean-to-fat ratio in meat
(D) feed efficiency
(E) meat quality
(F) waste management
(G) production costs
(H) food safety

ANSWER: (A) through (H), but these are just a handful of MANY important areas of animal-related research!

4. In preparing beef cattle for market, grain constitutes at least _____ percent of the diet. (circle one)

(A) 95
(B) 75
(C) 50
(D) 25
(E) 10

ANSWER: (A)

5. **The Animal Welfare Act ensures proper care and treatment of animals… (circle all that apply)**

(A) used in biomedical research
(B) used in teaching
(C) used in exhibition
(D) by dealers who provide animals
(E) on farms

ANSWER: (A), (B), (C), (D)

6. Breed Scramble

Classify the following breeds according to their species—Beef Cattle (BC), Dairy Cattle (DC), Sheep (SH), Swine (SW), or Poultry (P).

_____ **Berkshire**	_____ **Rhode Island Red**	_____ **Leghorn**
_____ **Brown Swiss**	_____ **Duroc**	_____ **Holstein**
_____ **Suffolk**	_____ **Jersey**	_____ **Lincoln**
_____ **Texas Longhorn**	_____ **Dorset**	_____ **Plymouth Rock**
_____ **Angus**	_____ **Hereford**	_____ **Yorkshire**

ANSWERS: Berkshire (SW); Brown Swiss (DC); Suffolk (SH); Texas Longhorn (BC); Angus (BC); Rhode Island Red (P); Duroc (SW); Jersey (DC); Dorset (SH); Hereford (BC); Leghorn (P); Holstein (DC); Lincoln (SH); Plymouth Rock (P); Yorkshire (SW)

Here's how *that* stacks up:

Beef Cattle—Texas Longhorn, Angus, Hereford
Dairy Cattle—Brown Swiss, Jersey, Holstein
Sheep—Suffolk, Dorset, Lincoln
Swine—Berkshire, Duroc, Yorkshire
Poultry—Rhode Island Red, Leghorn, Plymouth Rock

CHECK IT OUT

http://www.ars.usda.gov/is/
http://www.lib.iastate.edu/animalsci/index.html
http://netvet.wustl.edu/ssi.htm (Not a USDA-affiliated site)
http://www.nps.ars.usda.gov/programs/appvs.htm
http://www.lpsi.barc.usda.gov/
http://www.nadc.ars.usda.gov/
http://www.marc.usda.gov/
http://arserrc.gov/
http://www.nal.usda.gov/awic/
http://www.ansc.purdue.edu/USDA-LBRU/
http://usda.mannlib.cornell.edu/usda/
http://www.nal.usda.gov/fnic/foodcomp/
http://www.ars.usda.gov/is/np/agbyproducts/agbyintro.htm

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Learning More . . .

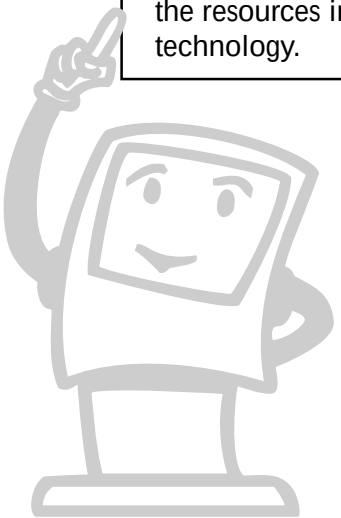
Barnyard Brushup

1

Traditionally, most of the **wool** produced in the United States has been sold as raw wool. About 25 million pounds are produced each year. Over the years, wool research at ARS has focused on making wool competitive with synthetic fibers. Innovations include shrinkproofing, creasing and dyeing methods, stain repellancy, and flame resistance.

Aquaculture is the production of aquatic plants or animals in a controlled environment, such as ponds or tanks. Catfish, salmon, and shrimp are a few examples. Aquaculture has been the fastest growing sector of the animal production industry worldwide for more than a decade. Between 1987 and 1997, the market growth rate for U.S. aquaculture production increased by 91 percent, bringing an estimated $800 million to the industry. The continued growth and competitiveness of U.S. aquaculture will be directly related to the resources invested in research and technology.

Both animal fats and vegetable oils may be converted into derivatives called "esters," which are being evaluated worldwide as environmentally sound alternatives to petroleum-based diesel fuel. These esters are referred to as **biodiesel.** But chemical technology for biodiesel production needs improvement to make biodiesel cost-competitive with conventional fuel while preserving the fuel characteristics needed for use in cold weather. ARS research is developing an enzymatic approach to produce biodiesel cost effectively from two neglected and inexpensive feedstocks—animal fat and recycled restaurant grease.



It's not what you think! **Green manure** refers to any crop or plant grown and plowed under to improve the soil by adding organic matter and releasing plant nutrients, especially nitrogen.

Whey is a watery byproduct from cheesemaking that contains about half the nutrients of milk. About 2.3 billion pounds of whey are produced each year. Thanks to research, a large portion goes into human food, including dairy products, prepared dry mixes, soft drinks, infant foods, candies, and bakery goods. It is also used in pharmaceuticals, often in the form of lactose. An even larger share of whey goes into feeds for cattle, swine, and household pets.

Collagen is a fibrous protein byproduct of leathermaking. Researchers have developed several purified collagen products, including food and cosmetic ingredients, and an artificial skin that helps burn victims heal.

Scrapie is a fatal, degenerative disease affecting the central nervous system of sheep and goats. It has no cure or treatment, and scientists do not fully understand how it is transmitted. Sheep can harbor the disease for up to 5 years before they show symptoms such as trembling, lack of coordination, or scraping against objects. Under USDA regulations, producers with confirmed cases of scrapie in their flock must often destroy animals in an effort to eliminate the disease. Recent research has produced an easy, relatively inexpensive test to detect scrapie before the animals show symptoms. Previously, scrapie could only be confirmed by examining the brains of dead animals. Clearly, this is an important step toward controlling the disease.

2

Pounds consumed per person per year:

297	Dairy products*	32	Eggs
65	Beef	14	Turkey
51	Chicken	1	Lamb
49	Pork		

* Includes fluid milk and cream products, butter, cheese, frozen dairy products, evaporated and condensed milk, dry milk products, and dried whey.

3

You may not have considered **waste management** an important area of animal research. In fact, cattle, poultry and swine from our nation's farms generate millions of tons of manure each year. While manure is a valuable resource in crop production, if improperly managed it can create significant environmental problems and human health issues associated with contamination of surface water and ground water as well as air quality. Improved handling, storage, application, and analysis methods must be developed.

4

Grain <u>usually</u> accounts for at least 95 percent of the diet, but researchers have found that adding a lot more grass will still produce high-quality beef. Less feed means lower production costs. This finding presents great opportunities for producers in the southern Great Plains region to market their cattle more efficiently.

5

Though the Animal Welfare Act does not include animals raised for food or fiber, USDA has long had a **concern for the health and well-being of farm animals.** ARS animal behavior research focuses on determining signs of stress in animals and developing management systems that maximize their well-being. Specific examples of research studies—impact of common livestock management practices such as castration and tail docking, environmental enrichment and group housing of dairy calves, management practices to reduce transportation stress, and buller-steer syndrome in large feed lots.

6

Animal breeding continues to play an important role in ARS' research agenda. Traits to improve factors such as reproductive rate, feed efficiency, growth, carcass and milk composition, egg production, and resistance to diseases and parasites are developed though both traditional breeding and genetic engineering.

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Barnyard Fun

Using the following terms, pick out which babies go with which moms and dads and match them up in the table below: (Hint: Several have more than one answer. PLUS, we've thrown in some extras for excitement!)

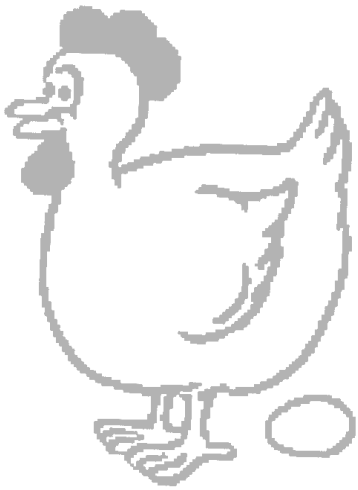
calf	bull	ewe	gilt	ram	cock
rooster	chick	whelp	poult	lamb	heifer
foal	shoat	pullet	sow	joey	
dam	buck	piglet	cow	mare	
tom	kid	lambkin	boar	hen	

	Male	Female	Young
Cattle			
Swine			
Sheep			
Chickens			
Turkeys			

Answers (from left to right, top to bottom): Bull, cow, calf; boar, sow, piglet/shoat; buck/ram, ewe/dam, lamb/lambkin; rooster/cock, hen/pullet, chick; tom, hen, poult

The Hen House

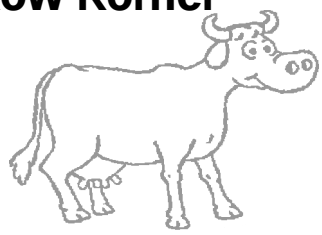
Fill in the Blanks—

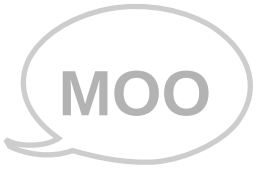


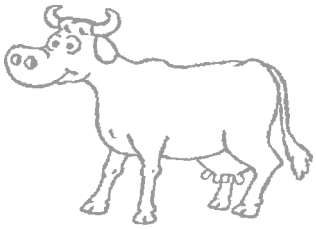
_ _ _ _ _ _ chickens (What old people aren't)
_ _ _ _ weather (Stinkin' weather)
chicken _ _ _ (Rhymes with "rocks")
chicken _ _ _ _ (Where chickens live)
_ _ _ _ _ _ _ wings (Great with hot sauce)
chicken _ _ _ _ (Good for a cold)
Chicken _ _ _ _ _ _ (The sky is falling!)
_ _ _ _ _ _ _ _ _ _ (Last one finished is a ……)

Answers: spring chickens, foul (fowl) weather, chicken pox, chicken coop, buffalo wings, chicken soup, Chicken Little, rotten egg

Kow Korner







List 10 words that rhyme with moo!

1. _____ *6.* _____
2. _____ *7.* _____
3. _____ *8.* _____
4. _____ *9.* _____
5. _____ *10.* _____

Some Answers: Boo, chew, clue, dew, do, drew, due, ewe, few, glue, goo, grew, hue, mew, new, phew, poo, roux, screw, shoe, stew, sue, who, you, zoo

The Sheep Shed

Some people confuse sheep and goats. Name three easy ways to tell the difference—

BAA!!

BAA!!

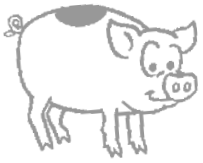
Sheep have _____; goats have hair.
Sheep say _____; goats say "maa."
Sheep are _____; goats are browsers.

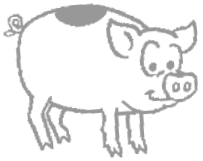
MAA!!

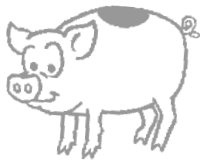
MAA!!

Answers: Fleece, "baa," grazers

The Piggery

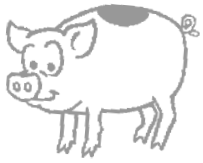


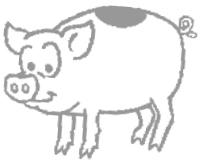




Unscramble the following:

Clues		
I-T-I-S-L-P-G-A	Boys love to pull them	_ _ _ _ _ _ _ _ _
H-I-N-S-C-I-L-T	The small intestines of pigs—popular in southern cooking	_ _ _ _ _ _ _ _ _
K-C-Y-P-B-G-I-A-G	Hop up for a ride	_ _ _ _ _ _ _ _ _
S-A-H-W-G-O-H	Garbage fed to hogs; ridiculous	_ _ _ _ _ _ _
S-G-I-P-I-N-K	A football	_ _ _ _ _ _ _
G-I-Y-G-P N-A-K-B	Investing in the future	_ _ _ _ _ _ _ _ _
A-C-N-O-B	Great in BLT's	_ _ _ _ _
O-Y-P-R-K	The world's looniest pig	_ _ _ _ _
D-E-D-G-I-E-P-H-A	Stubborn	_ _ _ _ _ _ _ _ _
G-H-I-E-O-T	To bind the legs together	_ _ _ _ _ _





Answers: Pigtails, chitlins, piggyback, hogwash, pigskin, piggy bank, bacon, Porky, pigheaded, hogtie

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