

Tennessee 4-H Swine Project

Advanced













CARCASS AND PORK PRODUCTS

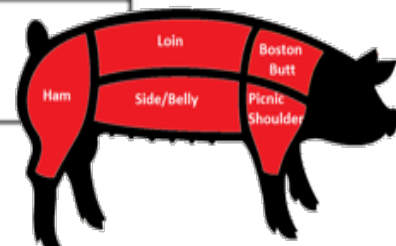
Outcome: Identify all retail meat cuts from a pork carcass and associate with the correct wholesale cut.



EXPLORE: Step Out Activity

Identify the Retail Cut and Primal/Wholesale Cut.

	Retail Cut Name	Primal Cut Name
		
		
		
		
		
		
		
		



EXPAND & APPLY

What skills did you learn? How does this relate to every day life? How can you use this knowledge in the future?



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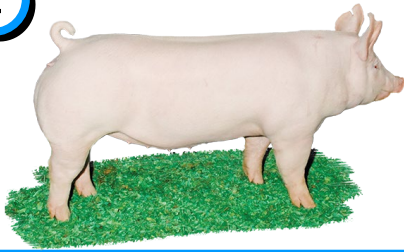
Outcome: Understand the factors that affect USDA grade in swine.



EXPLORE: Step Out Activity

Identify the Pork Carcass Grade Using Backfat Thickness and Degree of Muscling Scores.

1



Rib Fat Grade	Muscle Score	Final Grade

2



Rib Fat Grade	Muscle Score	Final Grade

3



Rib Fat Grade	Muscle Score	Final Grade

Step 1 – Estimate Last Rib Fat

Initial U.S.D.A. Grade	Corresponding Level of Last Rib Fat
#1	Less than 1.00 inch last rib fat
#2	1.00 – 1.24 inches last rib fat
#3	1.25 – 1.49 inches last rib fat
#4	1.50 inches or more last rib fat

Step 2 – Estimate Muscle Score

Muscle Score	Adjustment to Initial U.S.D.A. Grade Based on Muscle Score
Thick	Move up one (1) U.S.D.A. Grade
Moderate	No change in U.S.D.A. Grade
Thin	Move down one (1) U.S.D.A. Grade

<https://afs.ca.uky.edu/livestock/grading/Market-Hogs>

<https://www.ams.usda.gov/grades-standards/pork-carcass-grades-and-standards>



EXPAND & APPLY

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HEALTH AND WELFARE

Outcome: Describe the following diseases/conditions in swine: porcine epidemic diarrhea (PEDv), transmissible gastroenteritis (TGE), porcine reproductive and respiratory syndrome (PRRS), atrophic rhinitis, African swine fever, foot and mouth disease.

EXPLORE: Step Out Activity

Draw a line to match the swine disease with the description.

Swine Disease / Condition

Symptoms/Description

Porcine Epidemic
Diarrhea (PEDv)

Infectious disease characterized by snuffling, sneezing, snorting, and perhaps nosebleed which may progress to atrophy and distortion of the nasal and facial

Transmissible
Gastroenteritis (TGE)

Viral disease characterized by reproductive impairment or failure in breeding animals, and respiratory disease in pigs of any age. The most economically significant disease to affect US swine production since classical swine fever (CSF).

Porcine Reproductive
and Respiratory
Syndrome (PRRS)

A coronavirus causes this exotic viral diarrhea and closely resembles TGE. The main sign in all age groups is watery diarrhea. Thus far, the disease has not occurred in the western hemisphere.

Atrophic Rhinitis

Highly contagious, viral disease with signs, lesions and other features that closely resemble swine fever (CSF). The disease is exotic to the US.

African Swine Fever

Highly contagious viral disease of many animals. In swine, the disease is characterized by vesicles on the feet, snout and in the mouth.

Foot and Mouth
Disease

Acute, rapidly spreading, viral disease of swine of all ages, characterized by diarrhea and vomiting. High mortality in piglets under two weeks of age is common.

<https://vetmed.iastate.edu/vdpam/about/production-animal-medicine/swine/swine-disease-manual/index-diseases>



EXPAND & APPLY

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NUTRITION & FEEDING

Outcome: Complete Pearson-Square ration formulation with feedstuffs.



EXPLORE: Step Out Activity

Learn more about the Pearson-Square method.

Go to the following link to learn more about the Pearson Square method:

<https://utia.tennessee.edu/ansc/wp-content/uploads/sites/7/2020/07/BeefFeedstuffsActivityPacket.pdf>

Using Pearson's Square, determine how many pounds of each feed are needed to formulate the feed ration. Round units following decimals to the nearest tenth

Formulate 500 lbs. of a 21% CP ration using Soybean Meal (44% CP) and Corn (9% CP). How many pounds of soybean meal will be used? How many pounds of corn will be used?











EXPAND & APPLY

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Answer 1

	Retail Cut Name	Primal Cut Name
	Loin Chop	Loin
	Arm Roast	Picnic Shoulder
	Center Slice	Ham
	Boston Butt Roast	Boston Butt
	Butterfly Chop	Loin
	Pork Belly	Side/Belly
	Picnic Shoulder	Picnic Shoulder
	Loin Ribs	Loin

Answer 2

1	Rib Fat Grade	Muscle Score	Final Grade
	#1	Thick	#1

2	Rib Fat Grade	Muscle Score	Final Grade
	#3	Moderate	#3

3	Rib Fat Grade	Muscle Score	Final Grade
	#1	Thin	#2

Answer 3

Swine Disease / Condition

Porcine Epidemic Diarrhea (PEDv)

Transmissible Gastroenteritis (TGE)

Porcine Reproductive and Respiratory Syndrome (PRRS)

Atrophic Rhinitis

African Swine Fever

Foot and Mouth Disease

Symptoms/Description

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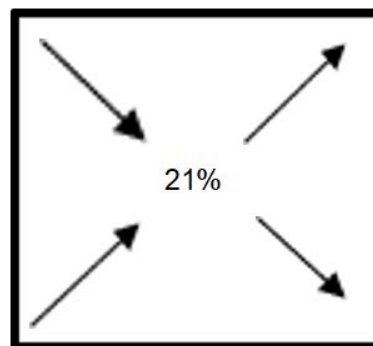
Answer 4

Pearson's Square Problems

Using Pearson's Square, determine how many pounds of each feed are needed to formulate the feed ration. Show ALL work! Round units following decimals to the nearest tenth. Formulate 500 lbs of a 21% CP ration using Soybean Meal (44% CP) and Corn (9% CP).

Soybean Meal 44%

12 Parts Soybean Meal



Corn 9%

23 Parts Corn
35 Total Parts

How many pounds of soybean meal will be used?

12 parts Soybean Meal / 35 Total Parts = .34% from soybean meal
.34 parts from soybean meal x 500 lb ration = 170 lbs soybean meal needed

How many pounds of corn will be used?

23 parts Corn / 35 Total Parts = .66 parts from corn
.66 parts from corn x 500 lb ration = 330 lbs corn needed

Double check your answer:

170 lbs of soybean meal + 330 lbs of corn = 500 lb ration