UNIT 4

Understanding Agriculture Animals

BEEF & SWINE LIVESTOCK EVALUATION

LIVESTOCK EVAL

- Livestock producers use visual observations to:
  - Select breeding cattle or swine based on conformation, breed character, structural soundness of feet and legs, and body capacity.
  - Select market animals based on muscle, frame size, body capacity, finish and structural soundness.

TERMS TO KNOW

- Anatomy-
  - The science of body structure or parts of an animal. External anatomy terms are used to classify animals.
- Conformation-
  - The physical arrangement of bone and body tissue. It includes the skeletal structure, muscling, fat balance, straightness of the animal's lines and structural soundness.
- Breed Character-
  - Visible in the head and general appearance of the animal.

TERMS TO KNOW

- Muscle-
  - Refers to the distribution of muscle throughout the animal. Well muscled animals will show fullness through the back, loin and rump.
- Finish-
  - Refers to the amount of fat cover on an animal.
- Structural Soundness-
  - The arrangement of bone and muscle tissue.
  - The legs of animal should be long and straight and have adequate bone and foot to carry the animal throughout its life span.

TERMS TO KNOW

- Body Capacity-
  - The depth of rib the animal displays. Typically analyzed from the side view of the animal.
- Frame Size-
  - The length and size of the animal. Used to compare animals that are of similar age to indicate growth and breeding potential. Frame should be proportional to muscle development.

WHY IS THIS IMPORTANT?

- Producers use these traits to select animals that carry desirable traits and cull (remove) animals that display poor traits and qualities.
- Animals that display undesirable traits should not be used for breeding purposes.
- Producers typically use additional data tools such as Average Daily Gain and Expected Progeny Differences to analyze breeding animals.

EXTERNAL ANATOMY

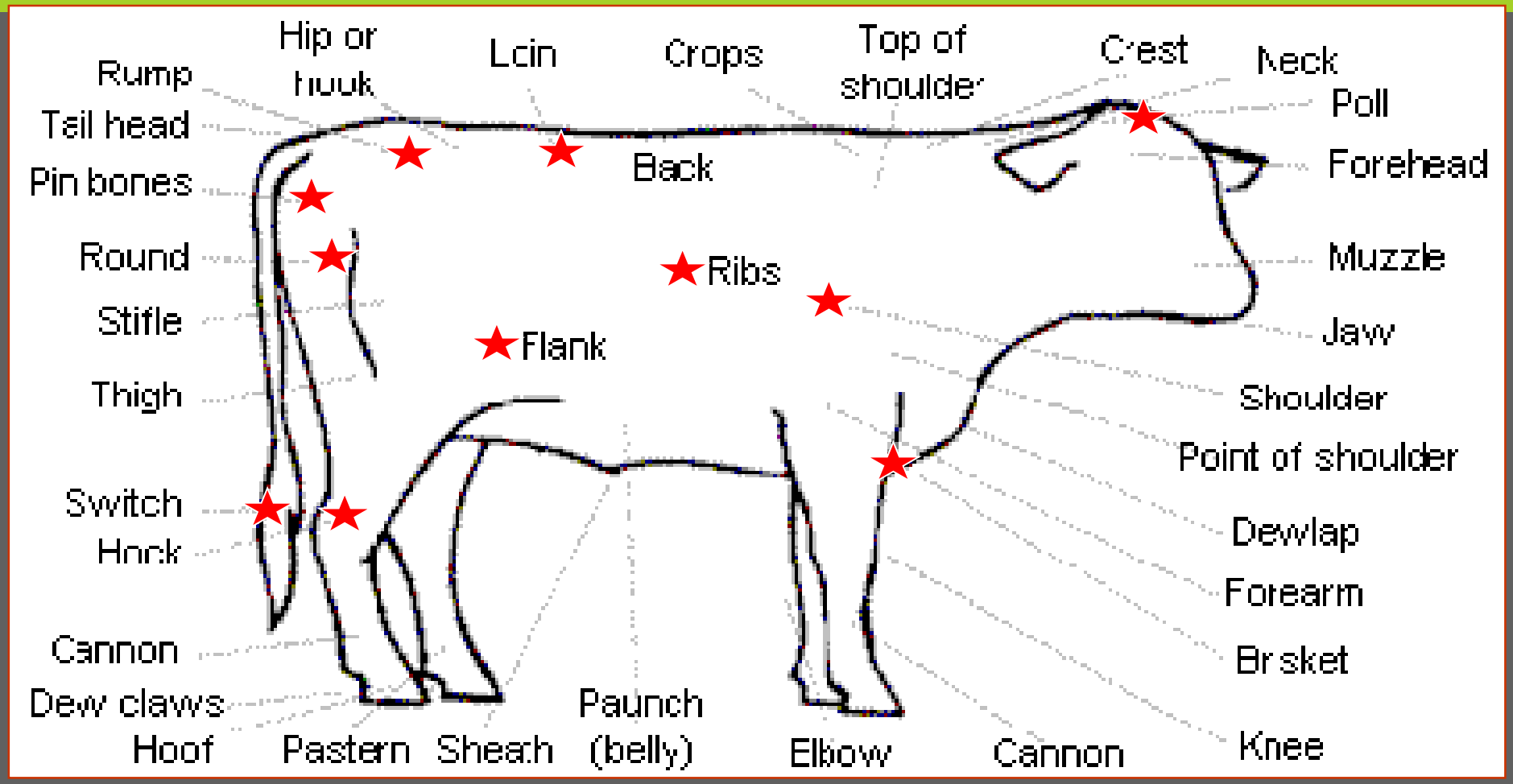
CATTLE

- Rump – part of the animal between the loin and tail
- Round – the muscled portion of the rear leg
- Loin – the muscled portion along the backbone of the animal
- Shoulder – the muscled portion between the neck and ribs of the animal
- Brisket – muscled portion between the front legs of the animals
- Switch – the hair at the bottom of the tail

CATTLE

- Poll – the top of the animal's head
- Flank – the pelvic region of the animal
- Hock – the part of the rear leg that corresponds to the knee, but bends in the other direction
- Ribs – the side section of the animal between the belly and top of the animal
- Heart Girth – the area that encircles the animal's body just behind the front legs
- Pin Bones – bones on each side of the tailhead

CATTLE


Rump
Tail head
Pin bones
Round
Stifle
Thigh
Switch
Hock
Cannon
Dew claws
Hoof
Hip or hook
Loin
Crops
Top of shoulder
Crest
Neck
Poll
Forehead
Back
Ribs
Flank
Muzzle
Jaw
Shoulder
Point of shoulder
Dewlap
Forearm
Brisket
Knee
Pastern
Sheath
Paunch (belly)
Elbow
Cannon

SWINE

- Ham – rear leg of the animal
- Loin – the muscled portion along the backbone of the animal
- Shoulder – the muscled portion between the neck and ribs of the animal
- Rump – part of the animal between the loin and tail
- Ribs – the side section of the animal between the belly and the top of the animal

SWINE

- Jowl – the chin area
- Pastern – the part of the animal's leg between the fetlock and the hoof
- Side – the section between the belly and the top of the hog (includes the ribs)
- Belly – the underside of the animal
- Hock – the part of the rear leg that corresponds to the knee, but bends in the other direction

SWINE

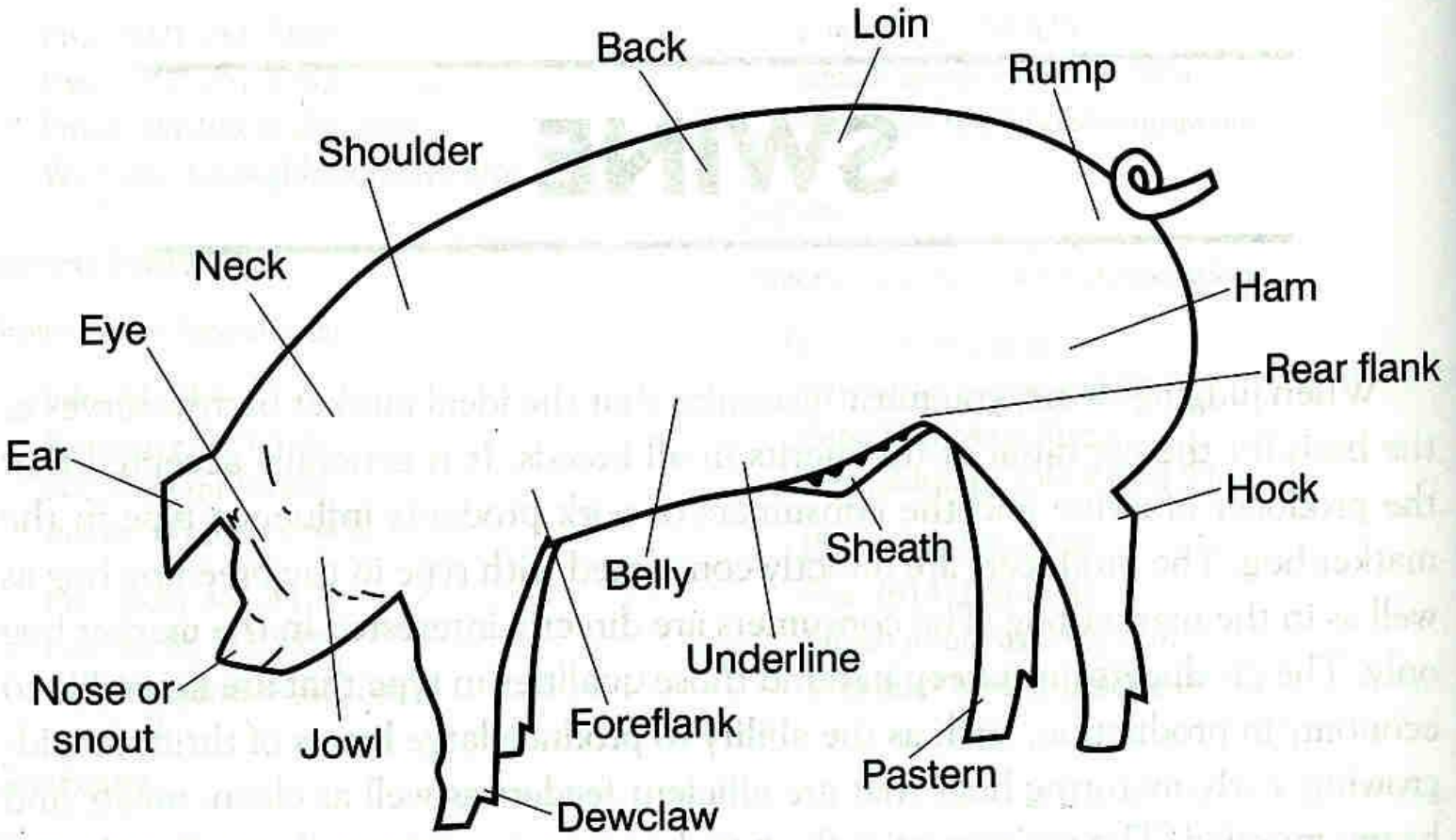


Fig. 4–1. Parts of the market hog. (Courtesy, Purdue University)

POULTRY EVALUATION

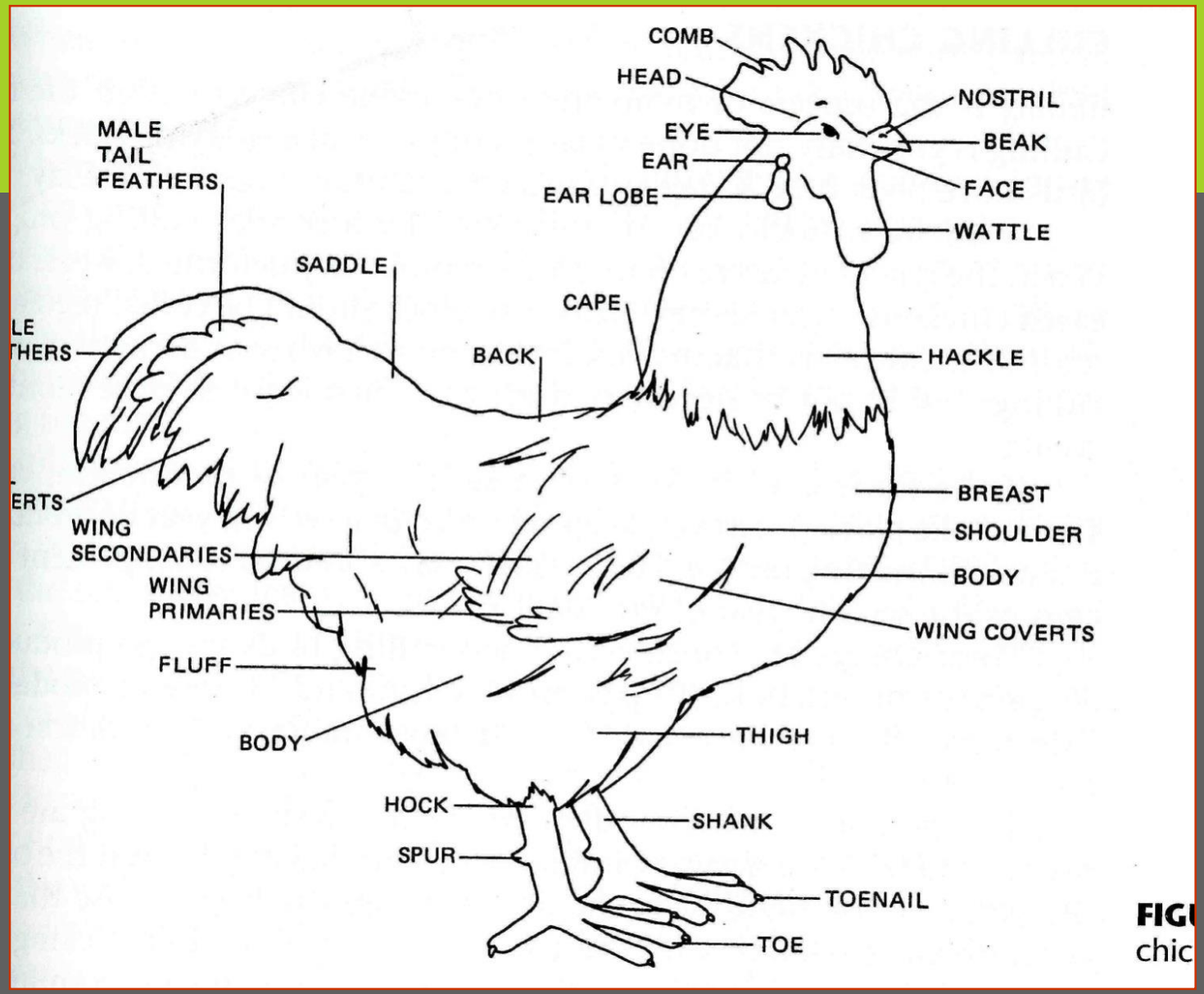
EXTERNAL ANATOMY – LIVE BIRDS & LAYING HENS

- Comb – the red structure on top of the bird's head
- Wattles – the fleshy structure on top of the bird's head
- Beak – pointed structure on the front of the bird's face that gathers food
- Eye Ring – the ring of color that surrounds the eye
- Ear Lobe – the slightly thickened tissue just below the ear opening
- Vent – external opening at the back of the bird

EXTERNAL ANATOMY – LIVE BIRDS & LAYING HENS

- Hock – corresponds to the knee of the human
- Shank – the leg of the animal
- Toes – the structures at the bottom of the bird's foot
- Breast – the muscled portion at the front of the animal along the breastbone
- Back – flattened area behind the head of the animal
- Abdomen – the front of the bird
- Body – the area on the side of the bird

POULTRY


COMB
HEAD
NOSTRIL
EYE
BEAK
EAR
FACE
EAR LOBE
WATTLE
MALE
TAIL
FEATHERS
SADDLE
CAPE
LE
THERS
BACK
HACKLE
ERTS
BREAST
WING
SECONDARIES
SHOULDER
WING
PRIMARIES
BODY
WING COVERTS
FLUFF
BODY
THIGH
HOCK
SHANK
SPUR
TOENAIL
TOE

BROILER BREED CONFORMATION SELECTION

BROILER BREED CONFORMATION

- Live birds are evaluated by assessing deformities, body confirmation and breast meat quantity. These birds are classified as either keep or cull animals to improve the overall flock traits that are passed on to their offspring.

- Producers should have the bird stand and move to accurately assess traits and characteristics the bird carries.

BROILER BREED CONFORMATION

- Body Conformation
  - Refers to the bird's structure and includes factors such as: width across the shoulder, length of the back, depth of body, spring of rib and width of keel.
- Breast Meat Quantity
  - Closely related to body conformation.
  - Refers to amount of meat the bird carries. Producers measure the length, width, depth and how the muscle is carried on the bird.
  - When evaluating birds, raise the bird and ask the animal to walk in order to evaluate legs, feet and toes.

BROILER BREED CONFORMATION

- Traits that will cause the bird to be culled from the flock to prevent undesirable traits being passed down.
  - Crooked Toes
  - Leg and Foot Abnormalities
  - Crossed Beak
  - Severely Crooked Back

CROOKED TOE

LEG/FOOT ABNORMALITY

CROSSED BEAK

CROOKED BACK

TODAY'S ACTIVITY

- Break up into groups of 3
- Get a large sheet of paper
- Pick a cow, pig, or chicken
- Draw the animal
- Label all of the parts from the notes
- Use markers/colored pencils/crayons
- Your books on the counter have pictures to use as examples