



## Building Your Herd (Version 4)

**Ranch Name:** \_\_\_\_\_

**Bull ID:** \_\_\_\_\_

**Breed:** \_\_\_\_\_

**Color:** \_\_\_\_\_

**Polled or Horned:** \_\_\_\_\_

**Markings:** \_\_\_\_\_

**Cow ID:** \_\_\_\_\_

**Breed:** \_\_\_\_\_

**Color:** \_\_\_\_\_

**Polled or Horned:** \_\_\_\_\_

**Markings:** \_\_\_\_\_

**Punnett Square for Color:** Use the following Punnett square to determine the color of your calf. Black is dominant (B) to red (recessive (b)). This means, that if there is a black gene 'B' present, a calf will be black.

		Bull's Trait	
		B	b
Cow's Traits	B	BB	Bb
	b	Bb	bb

Based on the Punnett square what is probability that the calf will be a specific color:

\_\_\_\_\_ out of \_\_\_\_\_ that the calf will be black.

\_\_\_\_\_ out of \_\_\_\_\_ that the calf will red.

**Roll the dice to see which instructions your calf will have** (follow example for even and odd rolls):

Roll two dice.

If the first dice is odd, the trait will be determined by row 1 of the Punnett Square.

If it is even, it will be determined by row 2 of the Punnett square.

If the second dice is odd, the trait will be determined by column 1 of the Punnett Square.

If the second dice is even it will be determined by column 2 of the Punnett square.

		Bull's Trait	
		(Dice 2 Odd)	(Dice 2 Even)
Cow's Traits	(Dice 1 Odd)	Both dice are odd	Dice 1 odd, dice 2 even
	(Dice 1 Even)	Dice 1 even, Dice 2 odd	Both Dice are even

**Dice 1:** \_\_\_\_\_

**Dice 2:** \_\_\_\_\_

**What instructions does your calf have?** \_\_\_\_\_

**What color is the calf?** \_\_\_\_\_

**Punnett Square for Horns:** Use the following Punnett square to determine if your calf has horns or is polled (no horns). Having horns is the dominant (H) trait and not having horns (polled) is the recessive (h) trait.

		Bull's Trait	
Cow's Traits			

Based on the Punnett square what is probability that the calf will be a have horns or be polled (no horns):

\_\_\_\_ out of \_\_\_\_ that the calf will have horns.

\_\_\_\_ out of \_\_\_\_ that the calf will not have horns.

Roll the dice to see which instructions your calf will have:

**Dice 1:** \_\_\_\_\_

**Dice 2:** \_\_\_\_\_

**What instructions does your calf have?** \_\_\_\_\_

**Does the calf have horns?** \_\_\_\_\_

**Punnett Square for Markings (White Face or Belly):** Use the following Punnett square to determine if your calf has a white face and belly (F) or if it is a solid color (f). White is a codominant color, so when a solid color animal is bred to one with white markings, the white markings will appear on the offspring.

		Bull's Trait	
Cow's Traits			

\_\_\_\_ out of \_\_\_\_ that the calf will have white markings.

\_\_\_\_ out of \_\_\_\_ that the calf will not have white markings.

Roll the dice to see which instructions your calf will have:

**Dice 1:** \_\_\_\_\_

**Dice 2:** \_\_\_\_\_

**What instructions does your calf have?** \_\_\_\_\_

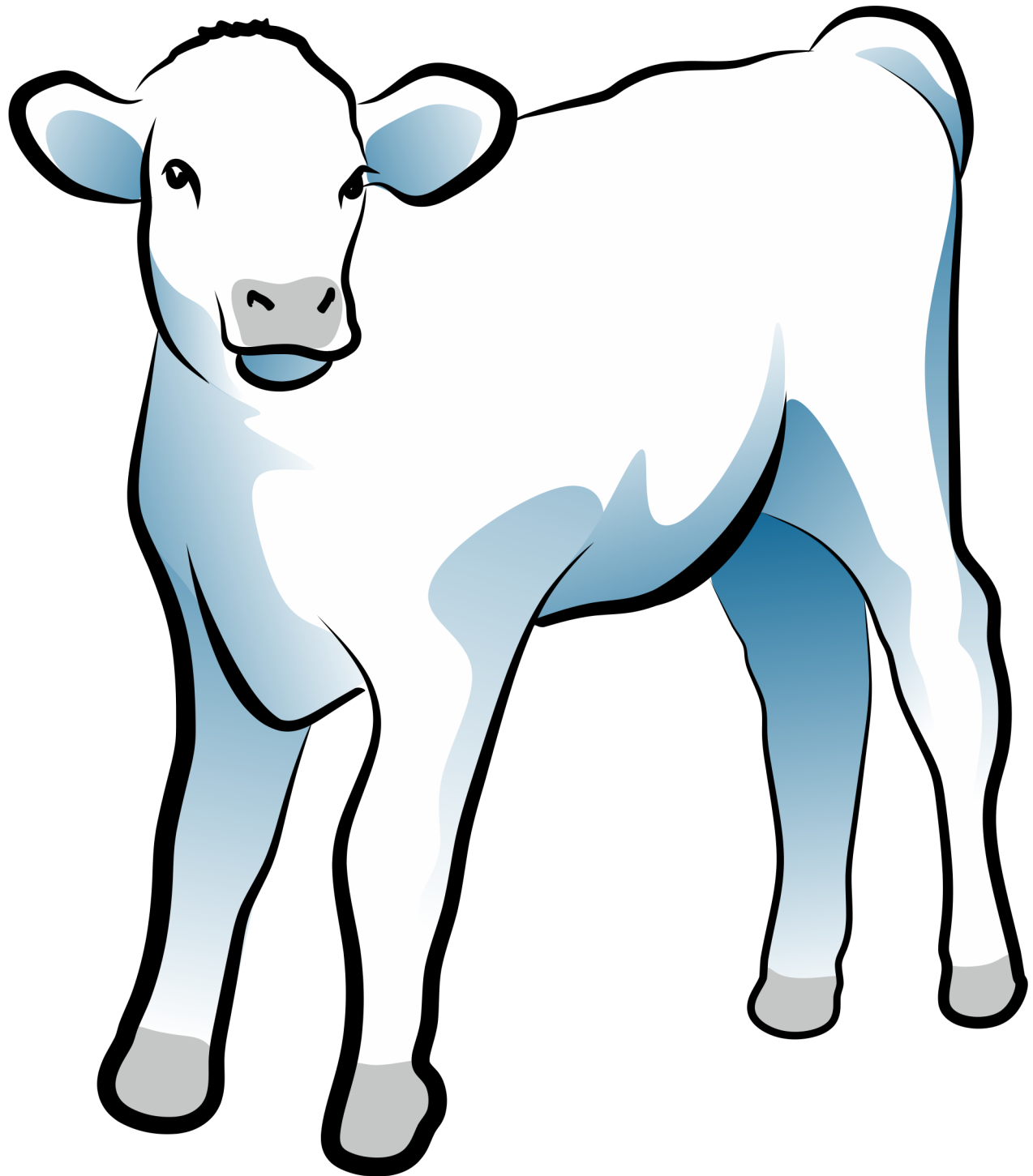
**Does the calf have white markings?** \_\_\_\_\_

## COLOR YOUR CALF

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Let's see what your calf looks like!

Use what you learned above about your calf's color, horns, and markings to show us what your herd's first calf looks like:



## BULL CATALOG

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### **CLOVER Ang B834**

Breed: Black Angus

Polled: (hh)

Color: Black (BB)

Markings: None (ff)



### **CLOVER Ang R234**

Breed: Red Angus

Polled: (hh)

Color: Red (bb)

Markings: None (ff)



### **CLOVER Herf 642**

Breed: Hereford

Polled: (hh)

Color: Red (bb)

Markings: White face, crest, dewlap (FF)



### **CLOVER Herf 253**

Breed: Hereford

Horns: (HH)

Color: Red (bb)

Markings: White face, crest, dewlap (FF)

## COW CATALOG

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### **CLOVER Ang B426**

Breed: Black Angus

Polled: (hh)

Color: Black (Bb)

Markings: None (ff)



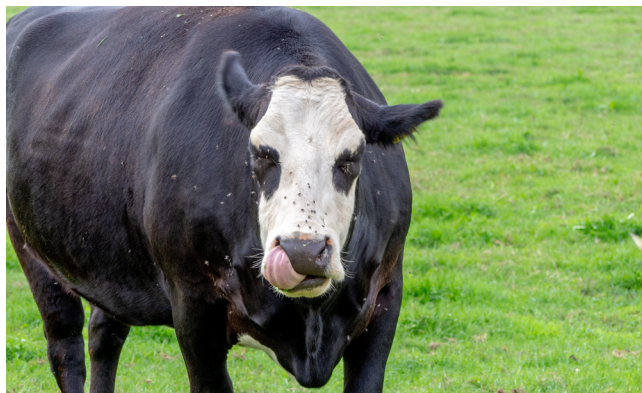
### **CLOVER Ang R733**

Breed: Red Angus

Polled: (hh)

Color: Red (bb)

Markings: None (ff)



### **CLOVER AngX 483**

Breed: Angus Hereford Cross

Polled: (hh)

Color: Black (Bb)

Markings: White face (Ff)



## COW CATALOG

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### **CLOVER Herf 275**

Breed: Hereford

Polled: (hh)

Color: Red (bb)

Markings: White face, crest, dewlap (FF)



### **CLOVER Herf 386**

Breed: Hereford

Horns: (Hh)

Color: Red (bb)

Markings: White face, crest, dewlap (FF)