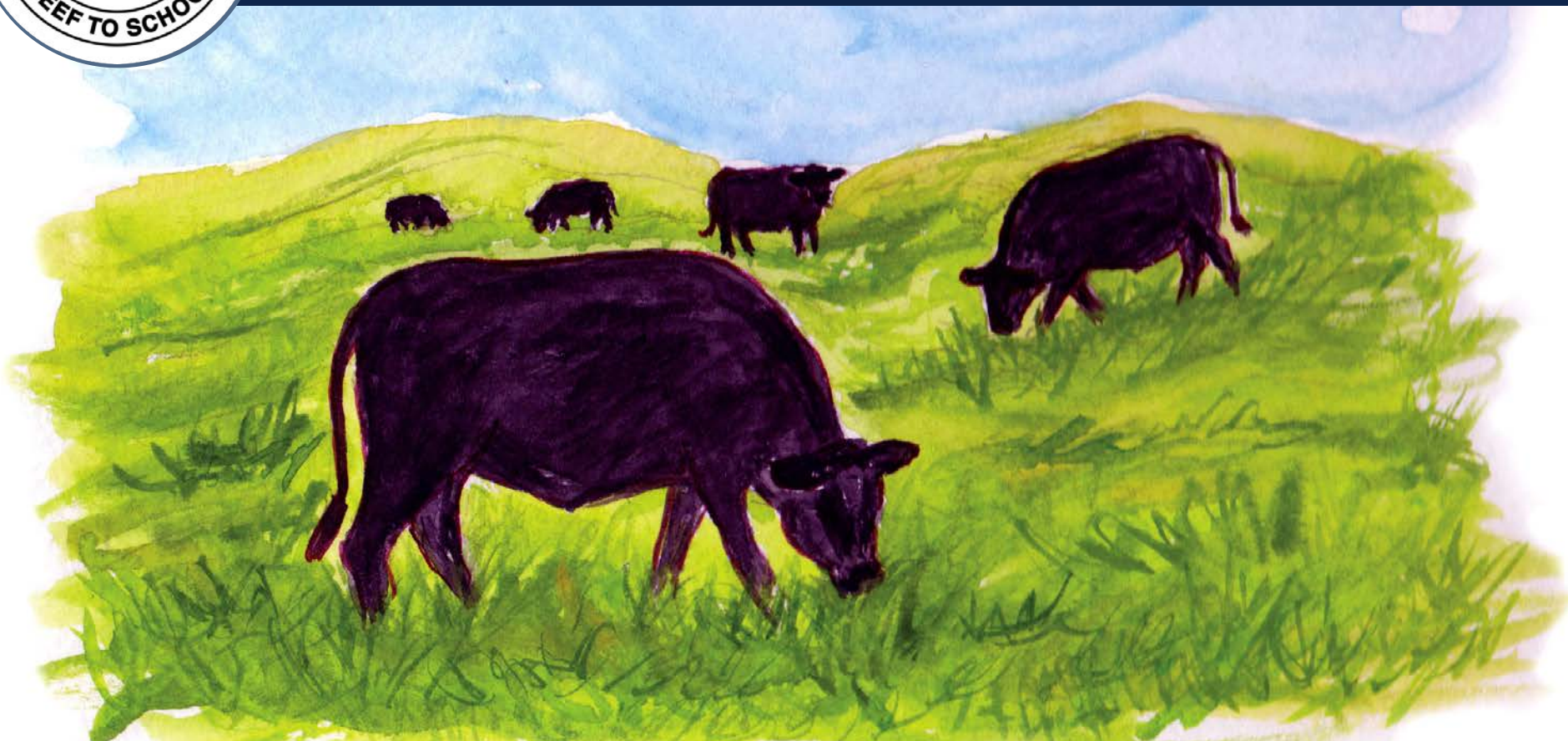




MOOOOIVING FORWARD TOGETHER

Strategies for Montana Beef to School



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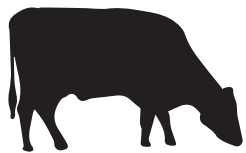
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www.montana.edu/mtfarmtoschool/beeftoschool.html

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Contact beef2school@gmail.com or 406-994-1952 for more information.



Various Montana
Producers and Processors



NATIONAL CENTER
FOR APPROPRIATE
TECHNOLOGY





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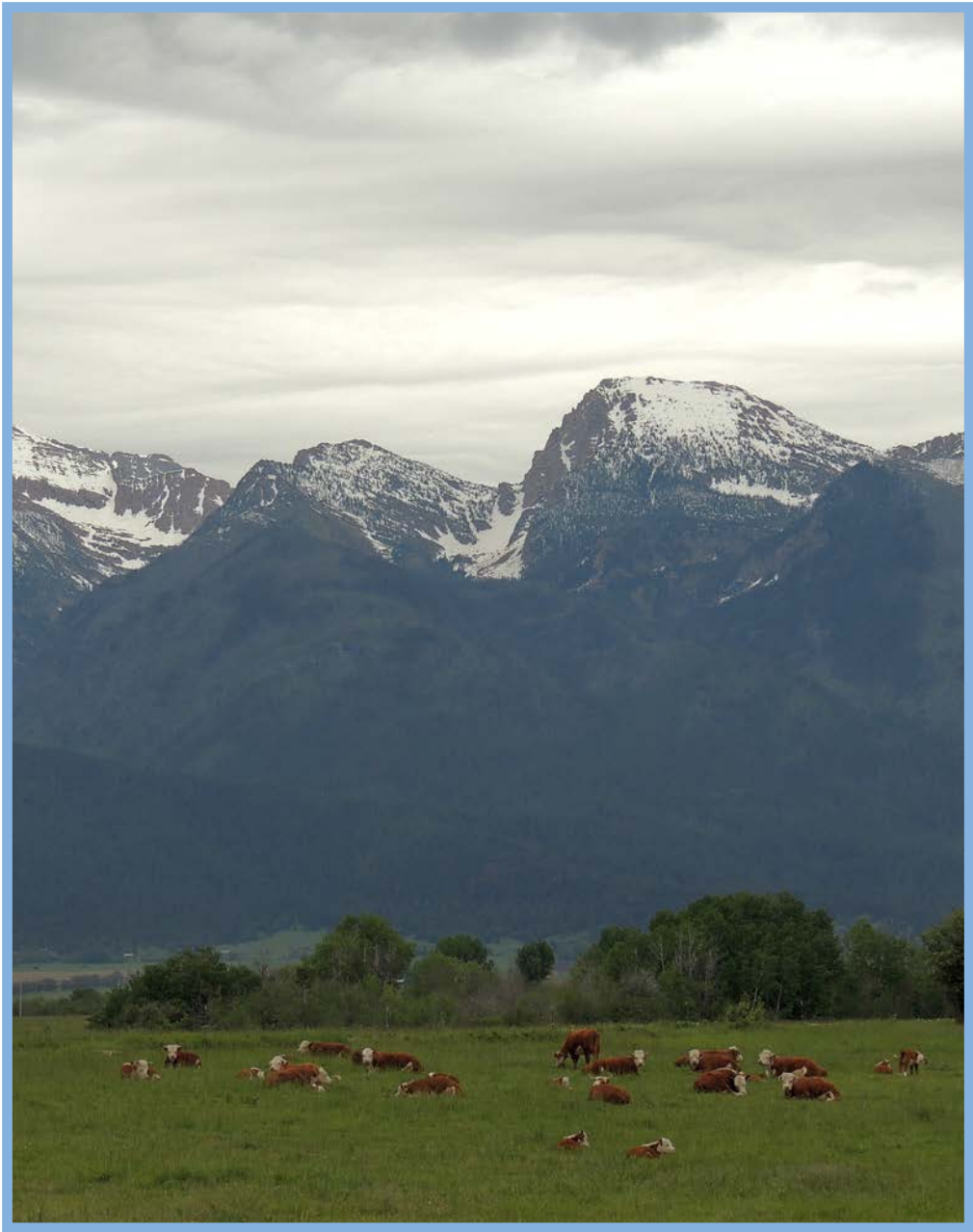
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THE MONTANA BEEF TO SCHOOL PROJECT

The Montana Beef to School Project aims to explore what factors make beef to school programs successful and encourage the use of local beef in every Montana school.

- Discover the creative ways that schools are working with producers and processors in Montana to procure local Montana beef.
- Bring tested beef to school strategies to your own community through lessons learned from case studies across six beef to school partnerships in Montana.

The Montana Beef to School Project is a three-year collaborative project between beef producers and processors, schools, researchers at Montana State University, National Center for Appropriate Technology, Montana Department of Agriculture, Montana Department of Livestock, Montana Team Nutrition Program, Office of Public Instruction and various community partners in the Montana Beef to School Coalition. The Montana Beef to School Project is funded by United States Department of Agriculture (USDA) Western Sustainable Agriculture Research and Education program.

BEEF TO SCHOOL IN MONTANA

In Montana, and across the country, producers and consumers report social, environmental, and economic benefits from local procurement efforts that link local beef producers and processors with schools in their communities and the region.

Beef to school efforts can increase the sustainability and viability of local and regional food systems as they have the potential to:

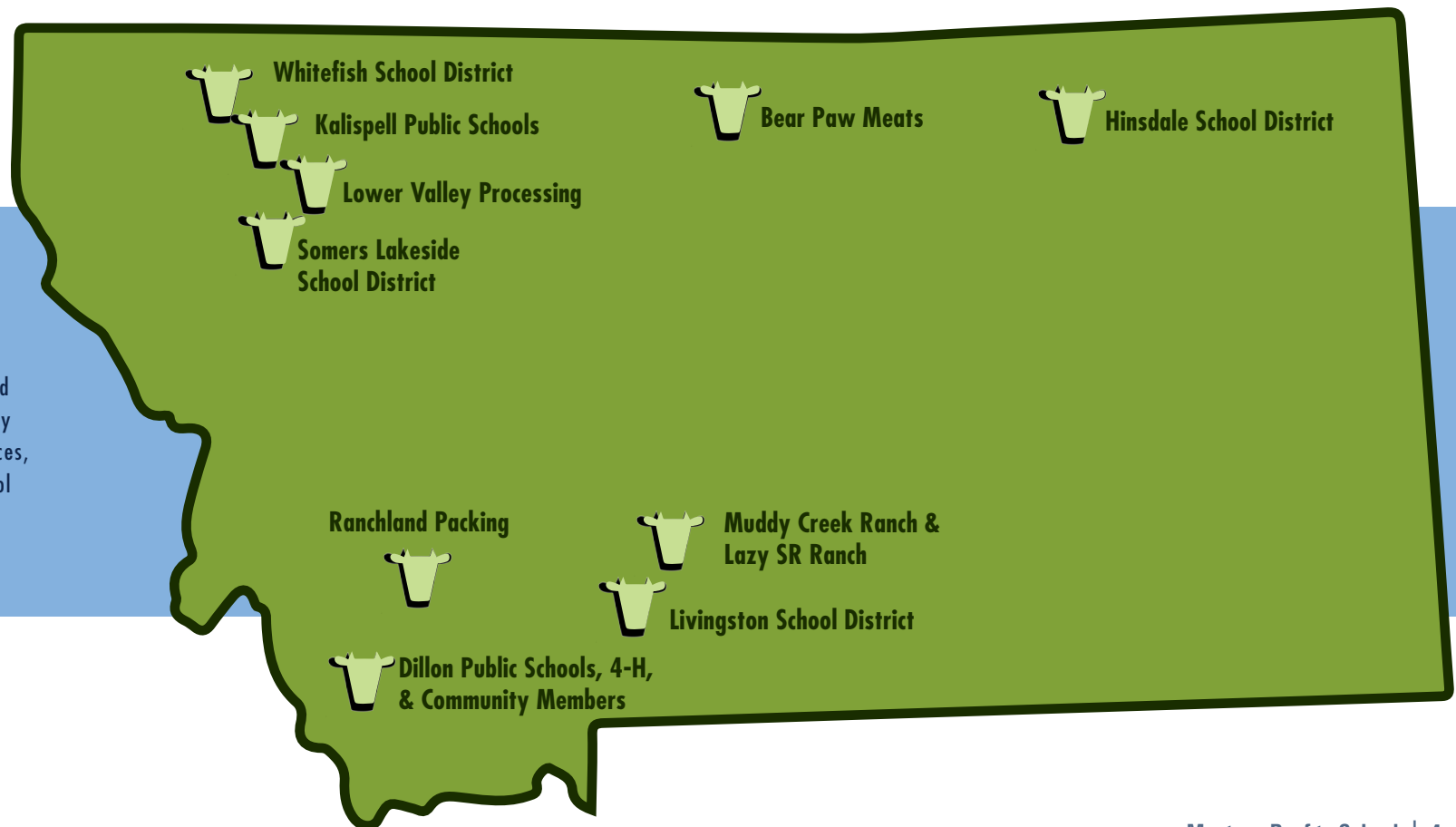
- enhance community food literacy and connections to local agriculture
- keep money circulating in local economies,
- reduce the need for transportation, packaging, and other inputs,
- increase access to local food,
- provide producers an additional market for their beef,
- and possibly utilize cattle that are fed and finished on locally available feeds like barley, wheat, alfalfa, oats, and grass as opposed to importing feeds into the state.

Montana beef to school efforts involve a variety of stakeholders, including producers, processors, foodservices and students at K-12 schools, and community members. Yet, as schools, processors, and producers in Montana are beginning to work together to bring local beef into schools, the results have been mixed: some local beef procurement models seem successful for all parties involved, while others have faced significant barriers in making beef to school programs viable.

Case study data were collected and analyzed using rigorous research methods; researchers conducted, recorded, and transcribed a series of interviews, identified themes and subthemes together, and wrote final documents by repeatedly referring to the data, and collected data where gaps in knowledge existed. See Appendix A for beef to school glossary words.



The Montana Beef to School Project conducted comprehensive case study research with schools, producers, and processors across Montana to identify the benefits, challenges, best practices, and gaps that exist for beef to school procurement models in Montana.



SCHOOL, PROCESSOR, AND PRODUCER PROTOCOLS

Each organization in the beef to school partnership has protocols to follow. These protocols, in the form of regulations, guidelines, and policies are designed to ensure students receive safe and nutritious school meals. Healthy school meals are the intended end-product in the beef to school process. Many protocols related to beef to school are established through local, state, and federal government agencies.



SCHOOL PROTOCOLS

Meat and other protein foods are an important part of the school lunch tray. The National School Lunch Program requires schools to offer:

- at least 2 ounces of meat or meat alternates per day for grades 9 through 12
- at least 1 ounce of meat or meat alternates per day for grades kindergarten through 8
- at least 8 to 9 ounces per week for grades K through 5
- at least 8 to 10 ounces per week for grades 6 through 8
- at least 10 to 12 ounces per week for grades 9 through 12

There are no maximum requirements for how much protein is served on the lunch tray, except that school foodservices must adhere to maximum calorie requirements for designated grade levels. For more information about the current school meal guidelines visit the United States Department of Agriculture's Food and Nutrition Service at fns.usda.gov/school-meals/child-nutrition-programs.

To provide perspective about the size of beef servings in school meals, 3 ounces of meat is about the size of a deck of cards. Many recipes use 2 to 3 ounces of beef per serving. Therefore, approximately 12.5 to 18.8 pounds of beef is required for a school lunchroom serving 100 students per meal.

In the 2015 through 2016 academic year, there were 821 schools and 410 school districts in Montana with just over 145,000 students. Six percent of schools had 500 or more students enrolled, 39% had 100 to 499 students enrolled, and 54% of schools had less than 100 students enrolled. Almost 13.5 million school lunches were served in 2015.

Approximately 40% of Montana schools participated in farm to school efforts and 47% of those schools source local meats, including beef. Schools can participate in farm to school activities through serving local food in the cafeteria, participating in local community agriculture, or providing food education in the classroom. Examples of education include a Harvest of the Month local beef curriculum (montana.edu/mtharvestofthemonth/) Montana Farm to School website (<http://www.montana.edu/mtfarmtoschool/beeftoschool.html>), and FoodCorps (<http://mtfoodcorps.ncat.org>) provides local foods education through service members and resources (mtfoodcorps.ncat.org/resources/).

The school foodservice director usually makes decisions about where to source foods. Decisions about where to purchase foods are influenced by the foodservice's budget, the cost of the food, input from the school board, administration, parents, other stakeholders, delivery schedules, kitchen capacity, and relationship with vendors. Based upon these factors, schools have the opportunity to work with a beef processor and/or producer to buy beef locally, purchase beef from larger food distributing companies, or acquire beef from USDA Foods Program (formerly known as commodities) at a minimal cost, if any. This case study focuses on the basics of purchasing beef locally.

Schools participating in the National School Lunch Program receive federal reimbursement for each meal served that meets nutrition requirements. The amount of reimbursement per meal is based on a child's eligibility for free, reduced, or paid meals. Household income determines whether a child qualifies for a free or reduced-price meal at school. In the 2016 through 2017 academic year, for a meal served to a child approved for free benefits, a school receives \$3.22 in federal reimbursement to cover the cost of labor and meal production. A school receives \$2.82 in federal reimbursement for reduced

benefits. A school receives \$0.36 in federal reimbursement for fully paid lunches.

PRODUCER PROTOCOLS

Producers raise cattle in a number of ways. Generally, beef cattle begin in a cow-calf operation where the producer breeds from a herd of cows and sells the calves at 8 to 10 months of age. In this stage, cattle receive their nutrition by grazing pastures and rangeland. Montana is generally known as a cow-calf state, as many calves are moved out of state in the finishing phase. In the dominant beef model, calves that are sold are then moved to the finishing phase. The finishing phase occurs in a feedlot where cattle grow to slaughter weight on grain or other concentrate feeds. Forage or grass-finished cattle are brought to slaughter weight on grass and hay, and tend to be older at slaughter. At 18 to 30 months of age, depending on the type of finishing, producers work with a state or federally inspected processing facility for slaughter and processing of the animal. There are almost 30,000 farms and ranches in Montana, with beef production representing about a third of the state's agriculture. The statewide cattle herd is about 2.5 million cattle. For more information about cattle production visit Montana Extension at animalrangeextension.montana.edu/beef/resources.html or to find Montana producers interested in working with schools and other institutions visit farmtocafeteria.ncat.org/producers/.

PROCESSOR PROTOCOLS

Processing of cattle means that the meat is prepared into cuts or ground products to be used by the consumer. Depending upon the processor's equipment and the customer's preferences, beef can be processed into cuts or ground products and

packaged in large or small quantities. For example, a school might prefer raw ground beef in 5 pound packages, raw ground beef made into hamburger patties and delivered fresh or frozen, or raw ground beef cooked and delivered as crumbles.

Local beef purchased by schools must be slaughtered and processed at a state- or federally-inspected processing facility. State-inspected facilities are inspected by a state agency and can sell products within the state; federally-inspected facilities are inspected by a federal agency and can sell products inside and outside of the state. Other processing facilities are custom exempt, meaning that the facility processes animals only for the animal's owner and the animal is not sold for retail – these facilities cannot market their beef to schools. At this time, there are approximately 20 state and federally-inspected beef facilities in the state of Montana. About 20,000 cattle (out of approximately 2.5 million statewide) are slaughtered in Montana facilities. In this case study, Bear Paw Meats, L and S Processing, and Lower Valley Processing are state-inspected facilities. Stillwater Processing, White's Wholesale Meats, and Ranchland Packing are federally-inspected facilities. For more information about meat processing in Montana visit the Montana Department of Livestock's Meat and Poultry Inspection Division at liv.mt.gov/mi/default.mcp.

Not all cattle are the same weight at slaughter and, therefore, yield different amounts of beef. Beef yield varies based on breed, fatness, feeding regime, and muscling. Yield of beef from cattle can be estimated at 40% of live-weight. The average 1200 pound live-weight cattle yields 400 to 500 pounds of beef. The producer or processor markets various cuts of boneless and trimmed beef to consumers, including ground beef, roasts and steaks, and other cuts. See Appendix B for a diagram of cattle cuts.

BEEF LIFECYCLE

COW-CALF

Cows are bred and calves are born and raised every year on cow-calf operations, spending time grazing on grass pastures within sight of their mothers.



WEANING

Beef calves are weaned away from their mothers between 6-8 months of age.



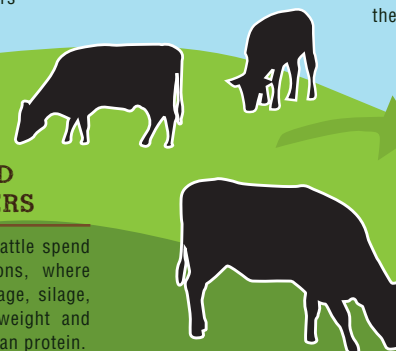
LIVESTOCK AUCTION MARKETS

Many calves leave the operation where they were born and are sold at livestock auction markets to stockers and backgrounders between 6-12 months of age.



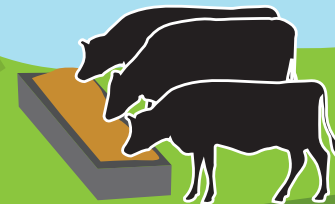
STOCKERS AND BACKGROUNDERS

Between 6-12 months of age, cattle spend time at backgrounder operations, where they gain weight on quality forage, silage, and/or grain. Here they gain weight and convert forage and grass into lean protein.



FEEDYARD

Cattle spend 4-6 months at a feedyard being fed a scientifically-balanced diet and receiving daily care. Some spend the rest of their lives on a pasture being grass finished.

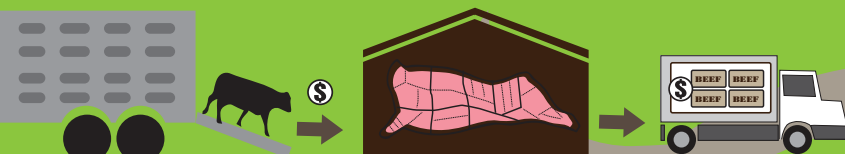


BEEF TO SCHOOL

COMMON CASE STUDY PARTNERSHIP MODELS IN MONTANA

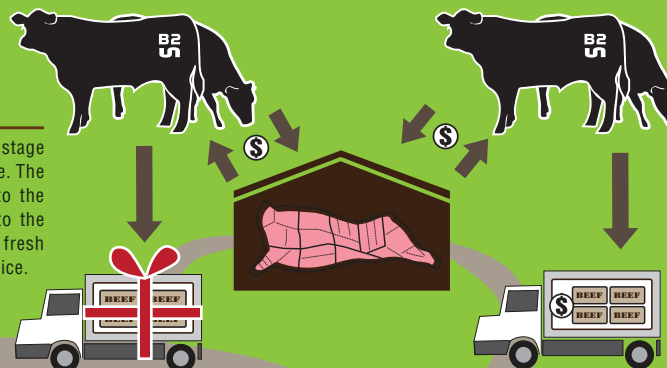
PROCESSOR CONTRACT

The processor buys local cull cattle from producers, processes the beef, and sells the beef to school. The processor delivers beef frozen or fresh to the school as specified by the foodservice.



PRODUCER DONATION

The producer raises cattle through finishing stage and contracts with a meat processor for a fee. The meat processor returns the beef product to the producer. The producer donates the beef to the school. The producer delivers beef frozen or fresh to the school as specified by the foodservice.



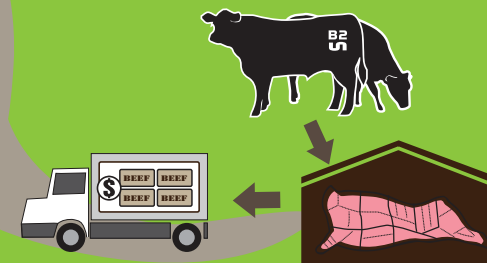
PRODUCER CONTRACT

The producer raises cattle through finishing stage and contracts with a meat processor for a fee. The meat processor returns beef product to the producer. The producer sells the beef to school. The producer delivers beef frozen or fresh to schools as specified by the foodservice.



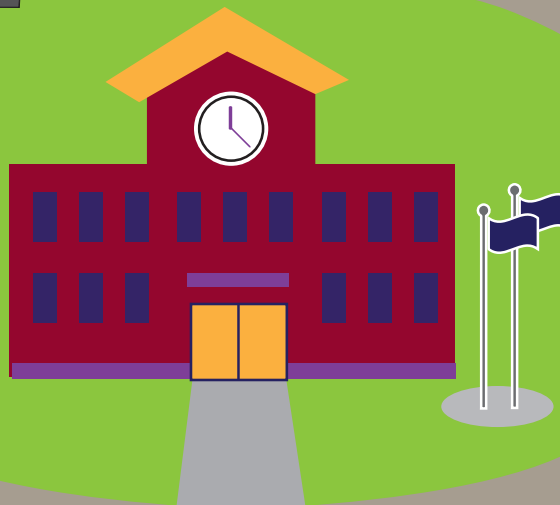
VERTICALLY INTEGRATED

Cattle are raised, finished, and processed by a business that is both a producer and processor (referred to as vertically integrated). The producer and processor business sells and delivers fresh or frozen beef as specified by the foodservice directly to school.



COMMUNITY MEMBERS

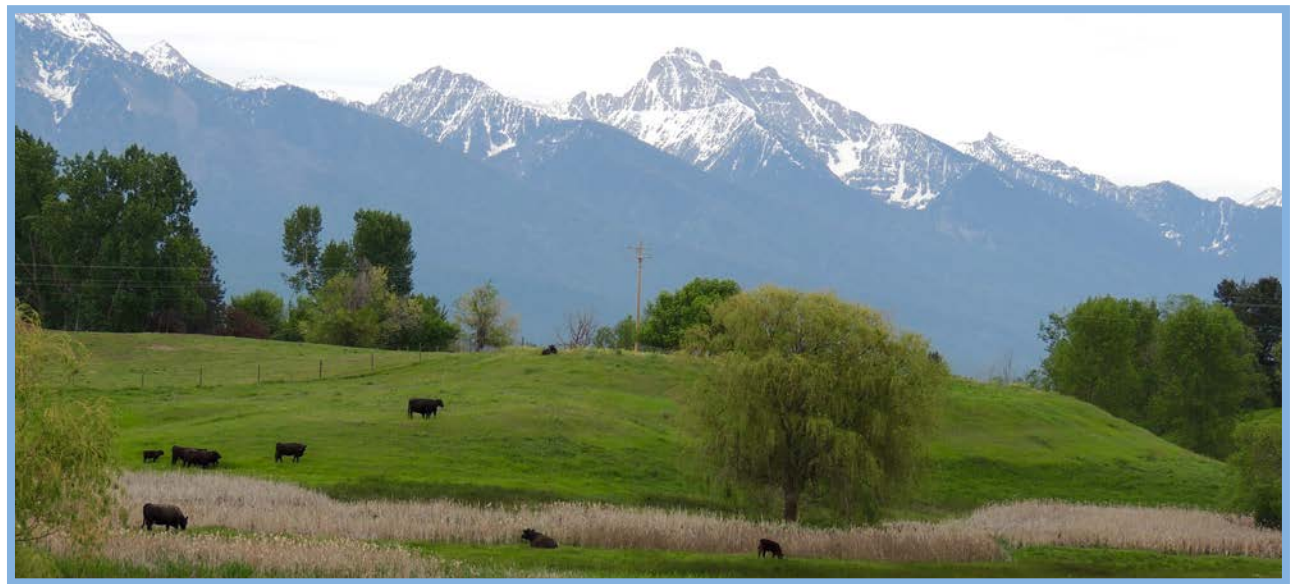
A 4-H producer raises cattle through the finishing stage. Community members and businesses purchase 4-H cattle from annual fair. The school, community member, or business contracts with processor and donates cattle to the school. The processor delivers beef frozen or fresh to the school as specified by the foodservice.



MONTANA BEEF IN EVERY MONTANA SCHOOL

When compared to other states in the US, Montana has the 3rd smallest state population and is the 4th largest in land area at 150,000 square miles. Montana has just over 1 million residents, approximately 2.5 million cattle, approximately 20 state and federally inspected processors, and about 145,000 students across 821 schools. Beef is a natural component of farm to school efforts in Montana.

These case studies are designed to highlight the needs of all key stakeholders in the beef to school process and inform strategies to make local beef available in every Montana school. The partnerships represented in this case study span six school districts that include 28 schools (range of 2 to 12 schools per district) and 11,149 students, 2 producers, 2 processors, and 1 vertically integrated producer and processor.



SCHOOLS

Dillon School District

- Parkview School, 477
- Dillon Middle School, 235
- Beaverhead County High School, 332
- TOTAL 1044

Hinsdale School District

- Hinsdale School, 32
- Hinsdale 7-8, 13
- Hinsdale High School, 20
- TOTAL 65

Kalispell School District

- Cayuse Prairie School, 193
- Cornelius Hedges School, 373
- Creston School, 83
- East Evergreen School, 418
- Edgerton School, 659
- Elrod School, 290
- Fair-Mont-Egan School, 138
- Helena Flats School, 174
- Evergreen Junior High, 166
- Kalispell Middle School, 1016
- Flathead High School, 1474
- Glacier High School, 1343
- TOTAL 6327

Livingston School District

- Winans School, 374
- East Side School, 294
- Pine Creek School, 30
- Sleeping Giant Middle School, 327
- Park High School, 500
- TOTAL 1525

Somers Lakeside School District

- Lakeside Elementary School, 350
- Somers Middle School, 172
- TOTAL 522

Whitefish School District

- Muldown School, 651
- Whitefish Middle 5-8, 535
- Whitefish High School, 480
- TOTAL 1666

TOTAL = number of students in attendance school year 2015-2016

PROCESSORS

Ranchland Packing (Butte)
L and S Meat Processing (Dell)

Bear Paw Meats (Chinook)

Lower Valley Processing (Kalispell)

Ranchland Packing (Butte)
Stillwater Processing (Columbus)

Lower Valley Processing (Kalispell)

Lower Valley Processing
(Kalispell)

PRODUCERS

4-H and local ranchers around
Dillon

Bear Paw Meats (Chinook) and
local ranchers around Chinook

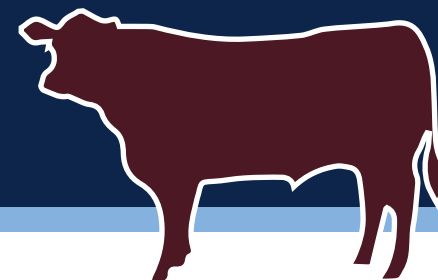
Local ranchers around Flathead
Valley

Lazy SR (Wilsall)
Muddy Creek (Wilsall)

Lazy SR (Wilsall)
Muddy Creek (Wilsall)
Local ranchers around Flathead
Valley

Local ranchers around
Flathead Valley

Each school, producer, and processor partnership has experienced unique benefits and challenges during their beef to school activities which are highlighted in the case study chapters that follow after this summary. Below, a brief overview of common themes that crossed beef to school partnerships in the case studies are discussed.



MOTIVATIONS FOR SOURCING MONTANA BEEF TO MONTANA SCHOOLS

- **QUALITY:** School foodservice staff perceive local beef as higher in quality when compared to other non-local beef sources due to the taste, freshness, and noticeably less amount of water and fat that cooks off during preparation.
- **COMMUNITY:** Schools, producers, and processors are proud of, and like to be engaged with, their community in local agriculture.
- **LITERACY:** Learning about Montana beef increases food and agriculture literacy among students, school staff, and communities.
- **NUTRITION:** Local beef is perceived as more nutritious due to a clean and traceable label. Conventional or commodity market beef is often an aggregated product from many cattle raised in different places. Because of geographic proximity in local systems, it is easy to visualize the kind of feeds and inputs used during production, processing, and meal preparation.

THE COST OF LOCAL BEEF

- **SCHOOL FOODSERVICE BUDGET:** Like most proteins, local beef is a costly portion of the school meal. School foodservices recommend budgeting school meals over a semester or year, rather than by meal, in order to balance the cost of more and less expensive food products.
- **PRODUCER BUDGET:** Producers find local beef difficult to sell at full value because of the price that a producer needs to break even on costs of production and what the school is able to afford. As such, producers can market less expensive cuts (e.g., chuck) to schools and premium cuts (e.g., sirloin) to other markets

such as restaurants. Additionally, producers can sell cull cattle that are less marketable to the larger beef market to schools.

- **PROCESSOR BUDGET:** Processors' prices are determined by the market values and have little leeway to depart from market, but can provide high volume prices to schools.

BEEF CUTS AND USE

- **CUTS:** Ground beef for hamburger and other foods is by far the most ordered product from producers and processors for use in school meals. Roasts and premium cuts are typically ordered only for special occasions. Further processing of beef with the inclusion of products such as mushrooms (USDA IQF or fresh) or lentils is used to extend the ordered beef product and broaden the nutritional profile of the meal.
- **RECIPES:** Beef is used in many recipes in the school lunchroom to meet the National School Lunch Program requirements, including burgers, meatballs, casseroles, pasties, meatloaf, tacos, spaghetti, sloppy joes, enchiladas, chili (commonly paired with whole grain cinnamon rolls in Montana), stroganoff, stew, roasts and others. These recipes are usually promoted by featuring the producer or processor partner in school signage, on the menu, and through word of mouth.

COMMUNITY INVOLVEMENT IN BEEF TO SCHOOL

- **RELATIONSHIP BUILDING:** Community relationships must be built in order to make a beef to school program succeed. Producers and processors must build a relationship in order to process cattle. Producers or processors must build a relation-

ship with schools in order to maintain a smooth ordering, storage, and delivery process. Schools must build a relationship with the community and school administration to generate buy-in for beef to school.

- **DONATIONS:** In-kind or monetary donations to support local beef sourcing occurs in many beef to school partnerships, whether occasional or on an ongoing basis.
- **PARENT AND STUDENT SUPPORT:** Building support from parents and students through education and marketing is paramount to making local beef a priority in the school foodservice budget.
- **ECONOMICS:** Publicizing the benefits of circulating money locally sells the beef to school program to many stakeholders.
- **EDUCATION:** Don't reinvent the wheel. Rely on resources available to conduct farm to school education, such as FoodCorps and Harvest of the Month.

KEY RECOMMENDATIONS FOR SUSTAINING BEEF TO SCHOOL PROGRAMS

- **START SMALL:** School foodservice directors overwhelmingly recommend to start small by choosing just one day during the school year or one dish where local beef is always featured, then expanding to weekly or monthly local beef meals.
- **MEET BASIC NEEDS:** Schools and processors must discuss and determine equipment needs to process the raw beef product into more efficient forms for the school foodservice (e.g., hamburger patties or beef crumbles). Producers and processors must engage in Good Agricultural Practices and adhere to food safety protocols established by the school and local sanitarian. Schools must train employees to

handle and cook a safe and desirable beef product and have enough storage to source quantities of beef for high volume prices.

- **CAPACITY:** Producers and processors have the capacity to increase beef to school partnerships. Schools have the desire, but cost remains the main barrier to beef to school.
- **POLICY:** Maintaining and increasing the number of state and federally inspected processing facilities in Montana is paramount to continuing beef to school efforts. Increasing the federal reimbursement rate for school meals and/or allowing schools to use USDA Foods dollars for local purchases will ease the ability for schools to purchase local beef.

WHAT'S NEXT IN BEEF TO SCHOOL

The long-term goal of the Montana Beef to School Project is improving Montana beef producers' and meat processors' business viability and sustainability, while increasing the availability and consumption of local beef in Montana's schools and communities. The case studies that follow begin to explore the feasibility of growing beef to school programs across Montana by featuring school, producer, and processor stories from the field. With this information, Montana communities and others around the United States can begin to find strategies to work together with producers and processors to use local beef in area schools.

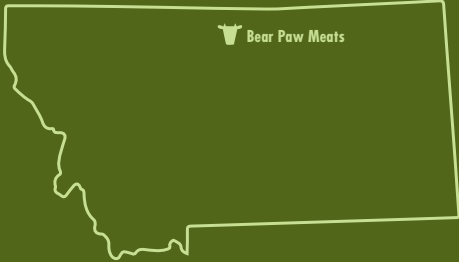


Bear Paw Meats

Hinsdale School District



BEEF TO SCHOOL AT BEAR PAW MEATS

 Bear Paw Meats

Cattle Inventory in Blaine, Phillips, and Hill Counties

Blaine County: 2015 Cattle Inventory: **65,000**

Phillips County: 2015 Cattle Inventory: **81,000**

Hill County: 2015 Cattle Inventory: **22,500**

2014 Human Population:

Blaine: **6,576**

Phillips: **4,194**

Hill: **16,434**

Processor Inspection Status

State Inspected Facility

Who is Bear Paw Meats?

Bear Paw Meats, located in Chinook, Montana, serves the central hi-line region of Montana. With a background in agriculture, the Buck family purchased Bear Paw Meats in 2006. The operation's owners, Carla and Dexter Buck, operate Bear Paw Meats along with several of their children. Grandchildren tend to also be present, adding to the family feeling of the business. Each family member has a unique role that contributes to the success of the operation. Bear Paw meats also employs non-family members to help run the operation.

Business Model

Bear Paw Meats is a family owned vertically integrated cattle, feeding, auction, processing and retail meat enterprise. Vertical integration means that the company owns and operates the supply chain for the final product (produce feed, ranch cattle, and process meat). The operation is a state inspected facility, allowing their products to be sold to practically any buyer within the state of Montana.

Before the Bucks purchased Bear Paw Meats, the business model was entirely focused on serving clients' custom processing needs. Bear Paw's customers would bring in live cattle, sheep, or pigs for processing and request various cuts of meat. Since purchasing the operation, the Bucks have expanded their business model to include processing animals owned by Bear Paw Meats and sold directly to customers (restaurants, schools, and individuals). The facility processes cattle, sheep, and pigs today.

Today, Bear Paw's core customer base is located in Blaine, Hill, and Phillips Counties. The business also services Montana customers beyond this three county region including clients in Cascade and Valley Counties. In these counties, Bear Paw meats sells to restaurants, schools, and individuals.

The Buck family business is very busy. At the processing plant in Chinook, customers can stop in and purchase a wide variety of

“On our farm, we grow barley, corn, and alfalfa. We grow the feed that we feed the cattle that we process.”

beef products, including steaks, roasts, hamburger, Italian sausage, beef jerky and even bones for their dog. For larger accounts such as businesses or institutions, Bear Paw delivers the order directly to the location of the customer. Dexter and Carla's daughter Ashley heads up a retail location 20 miles away in Havre that opened in 2015. This location offers the same products as the Chinook location does and other Montana made products, specialty local foods, wine and craft beer, and frozen fish. Throughout the summer Bear Paw Meats also sells their products at farmer's markets in Great Falls and Havre. Additionally, Bear Paw Livestock Commission Company is the family's auction enterprise that holds cattle auctions every Friday and occasional special sales dates. Additional farming operations are devoted to raising crops that are used as feed for animals in Bear Paw's small feedlot. The farming operations include raising barley, silage corn and alfalfa.

Production and Processing

Cattle, primarily Angus, are sold through Bear Paw Meats' retail outlets. The animals are all under the age of 30 months and most are in the 18 to 24 month range. Many of these animals are purchased at around the age of 6 months from local ranchers.

The cattle used in Bear Paw's retail operation are put in the operation's feed lot for approximately 180 days. They are fed a ration of barley, alfalfa, and corn silage. Most the feed is grown by Bear Paw but they also purchase feed, typically barley, from local farmers.

Animals purchased from local ranchers are finished in Bear Paw Meats' small feed lot and account for 15% to 20% of all cattle processed by Bear Paw each year. Bear Paw Meats process around 200 head of cattle each year that they own and will market the beef directly to customers through one of several retail operations. Custom



cutting remains a majority of the over 1,100 cattle processed by Bear Paw Meats each year. Currently, the business harvests cattle only on Thursdays when the state inspector is on site and processes on other days of the week.

Beef to School Program

History

Since 2008, Bear Paw Meats has been selling products to K-12 schools in their region for use in the school lunch program. Bear Paw Meats began selling to schools after they observed that their quality of beef was higher than what was being sold at schools. The Bucks believe that the quality of the burger comes from what the cattle is fed. With their vertically integrated operation they are able to control feed and create a consistent product for school lunchrooms and all of their customers. Bear Paw Meats defines local as beef that is produced, processed, and sold regionally. The business enjoys marketing their beef in the region around Chinook, Montana. Schools where Bear Paw Meat is sold are aware that the beef in the cafeteria is local.

School Partnerships

Bear Paw Meats worked with several schools in the region during the 2015 through 2016 school year. Hinsdale Public School is one example customer. During that school year, one-fourth of all beef that is processed went to area schools. Each year, Bear Paw Meats tries to grow their beef to school program by adding another school. Schools primarily utilize Bear Paw Meats' ground beef in their menu offerings. Items like tacos, lasagna, sloppy joes, hamburgers, spaghetti and a variety of casseroles are regulars on school menus. Some schools that work with Bear Paw Meats also utilize roast beef in addition to ground hamburger. Selling beef to schools has also opened the door for Bear Paw to sell pork sausages to schools for their breakfast programs.

Why Build a Beef to School Program

Customers, including schools, of Bear Paw Meats appreciate that they can trace beef purchased from Bear Paw Meats to the producer and processor. Many parents also like being informed about the nutrition of what is being served in the school cafeteria and Bear Paw can provide that information. The business has experienced that some communities are more supportive than others of local beef and farm to school products in general. As such, the business looks to educate consumers about the many benefits of local beef. In some schools, students are aware that the beef in their lunch is provided by a local animal, processed in a local processing facility and delivered by a local company to them. Carla enjoys educating students about the local beef supply chain.



Bear Paw Meats considers the products that they offer to be high quality and feels that their beef is of higher quality than beef sold by large distributors. One advantage of their product is that it is easier to track the beef sold through Bear Paw Meats than by large distributors. Furthermore, an animal of the specific age range that Bear Paw markets, between 18 and 30 months, is typically a prime-grade quality animal. The beef from a large distributor could have come from a young animal, very similar to Bear Paw's, or it could have come from a much old cull cow or bull. Often meat from older animals does not grade as well as meat from young animals. Carla also pointed out that they finish (or fatten) their animals on a fairly consistent ration of local feeds, primarily barley, silage corn, and alfalfa hay. This helps them to produce a product that has a very consistent nutritional profile from one animal to the next. The meat processed through the business does not have fillers such as soymeal, lentils, or ice chips added and is 86 to 88% lean. This type of consistency may be hard to obtain from a large distributor.

How to Connect with Schools

Bear Paw Meats finds that the best way to connect with schools is through the head cook since school chefs love the food that they are serving to students. The business promotes the benefits of working with their local beef products in the kitchen and how much the students will enjoy consuming local beef products. The head cook usually has to discuss local beef purchases with the superintendent.

“Our customers realize that we can trace the beef back to the way we process our beef. We can trace it back to the producer if we have to. All the way back. People like that.”

Connecting with the superintendent may also be useful for promoting the beef to school program. When having a conversation with school staff, it has been important to explain that schools are allowed to purchase beef directly from state inspected facilities per agricultural policy.

The business recommends starting the beef to school conversation in late spring or summer or very early in the fall as most head cooks have their ordering started by the beginning of the school year. Most head cooks do not work in the school foodservice during the summer. The best way to connect is through an in-person visit.

Schools primarily order raw ground beef. The steaks and roast from these animals are marketed primarily through restaurants and their retail outlets. Some of the hamburger from these animals is marketed to schools. Two schools order large arm, chuck, or rump roasts or deli roast beef used for French dip sandwiches. Bear Paw Meats does not market any pre-cooked burger to schools, but they do provide pork sausage links to several school breakfast programs.

Bear Paw Meats delivers orders to schools on a regular schedule. Customers place their phone order and receive weekly or bi-weekly deliveries. Since the processor is state inspected, the business hires two delivery drivers that travel to the east and west of the business. They like having a delivery model where their product is labeled and delivered separately from other products as it stands out more. Through research, Bear Paw learned that only federally inspected processors can have their products delivered through larger delivery services such as Sysco.

Beef to School Costs

Bear Paw Meats sells their beef at prices that fluctuate with prices determined by supply and demand of the market. Price of beef cuts are based upon factors such as the costs of purchasing, feeding, and processing cattle. Schools receive a less expensive price on beef than the public because they buy in bulk packaging. Since the cost of local beef is usually a concern for schools, Bear Paw Meats talks about how price determines quality across the beef market.

Beef to School Program Needs

There are several factors that Bear Paw Meats has considered when maintaining a beef to school program. With regards to food safety, Bear Paw Meats follows guidelines for state inspected facilities and

safe delivery practices for every customer. As such, the business does not need to modify its food safety practices specifically for schools. Working with schools has required that the business stays informed about nutrition guidelines for protein in the National School Breakfast and Lunch Programs. Attention to the guidelines was particularly important when changes were made in serving requirements of protein foods at schools in the Healthy, Hunger-Free Kids Act of 2010.

A majority of the schools that Bear Paw Meats works with have enough storage space to receive beef every other week. They have marketed their beef to school program to other schools that would require deliveries once per week. To process beef for schools, the operation purchased a new grinder to process ground beef.

Bear Paw Meats markets their beef to school program directly to schools. In the future, they plan to provide information in their advertisements about involvement with beef to school.

Sustaining a Beef to School Program

Supporting a beef to school program takes time on behalf of Bear Paw Meats to educate school foodservices how to set up orders and deliveries with a new and smaller business and use raw and local beef products in the kitchen. Sometimes it is difficult to convince foodservice staff to engage in beef to school when they are used to obtaining and using the same food products for years. Specific to the region of Montana that Bear Paw Meats resides, finding skilled and consistent labor to accommodate their production levels has been a challenge.

The Future of Beef to School for Bear Paw Meats

Bear Paw Meats sees community support as key to growing beef to school programming in the future. For example, parents should advocate for farm to school products to school board officials to grow the use of Montana foods in Montana lunchrooms.



BEEF TO SCHOOL AT HINSDALE SCHOOL DISTRICT



Schools Involved

Hinsdale Elementary School, 32
Hinsdale 7-8, 13
Hinsdale High School, 20

Number of School Lunches Served Per School Day

47-50 meals per day

School foods prepared in Conventional Kitchen

Foodservice Staff in Case Study

Head Cook – Joyce Leatherberry
Assistant Cook – Margo Salvesson
Agriculture Education Teacher –
Patti Armbrister

School Lunch Participation Rate

Valley County (2014) – 74.46%

Local Beef Dishes Served

Shepherd's pie
Beef stroganoff
Cauatini
Enchilada casserole
French dip

Goulash
Hamburgers & cheeseburgers
Lasagna
Meatloaf
Meatballs

Roast beef
Sloppy joes
Spaghetti sauce
Spanish rice
Stew

Super nachos
Tacos
Taco salad
Taco soup
Tater tot casserole

School Demographics

Hinsdale School District is located in Hinsdale, Valley County, Montana. The district consists of one school that serves kindergarten through grade 12. In 2015 through 2016, enrollment included 32 students in elementary school grades, 13 students in middle school grades, and 20 students in high school. During the same school year, Hinsdale School District served all meals from a conventional kitchen to approximately 64 students. In 2014, 74% of students participated in the school lunch programs across Valley County.

Hinsdale's foodservice is operated by head cook Joyce Leatherberry and assistant cook Margo Salvesson. Joyce and Margo have been at Hinsdale since 2004 and 2009 respectively. Patti Armbrister is the agriculture education teacher who has been assisting with farm to school programming in Hinsdale for the past 13 years. Patti is credited with being the individual who introduced the idea of serving local beef in the school following a lesson on food miles.

Beef to School Program

History

Hinsdale School District began purchasing local beef in 2011 following an educational lesson on *food miles*. The lesson focused on how far food travelled before reaching student lunch trays. Foodservice staff were surprised to learn that the beef they were serving was traveling to Hinsdale from Houston, Texas – more than 1,700 miles away from Hinsdale. This number did not count the trucking of cattle before they become meat and the miles from the feedlot to the packer then to Houston Sysco. The whole meal (including beef and other food items) added to more than 7,000 miles.

With more cattle than humans residing in the state, the foodservice staff thought that Montana must have the capacity to offer high quality locally produced beef to schools like Hinsdale. Moreover, many Hinsdale students live on cattle ranches or have family connections to the ranching industry. They felt it was time to start serving local beef.

For a short time, Hinsdale struggled to understand the "how to" of serving local beef, including finding a producer or processor, cost, and logistics. The beef to school process became much easier after making a connection with Bear Paw Meats in Havre, Montana. Today, 100% of the beef that is served at Hinsdale School District is sourced from local producers and processed at Bear Paw Meats.

What is Local Beef?

Hinsdale School District defines local beef as raised in Montana. The school sees the whole state as an avenue to purchase local foods, especially with fewer outlets available to obtain foods in rural eastern Montana. Bear Paw Meats is a producer and processor of Montana meats and is located approximately 109 miles to the west of Hinsdale. It is the closest state inspected processor that is available for the school. State or federal meat inspection of the processing facilities is required for schools to source meats.

Why Local Beef is Used in the Foodservice

Serving local beef in Hinsdale schools receives support from students, parents, foodservice staff, the community, and the school district.

Initial hesitation to use local beef due to the high cost quickly dissipated when the first meal was served and 100% of the students ate lunch that day, something that had not happened at the school in the previous 16 years. Foodservice records show that beef food waste was high before serving local beef – twice as much on the days that non-local beef sourced from a major foodservice distributor was served. Foodservice staff now sees almost zero waste from the student trays when local beef is served. Students are beginning to recognize the importance of the quality of food that they are being served.

Foodservice staff believes that the quality of locally sourced beef is better. They notice that when preparing local beef, less grease and liquid is collected from the cooking process. Previously used commodity beef yielded up to a gallon of grease and liquid when cooking beef products each time. Foodservice staff are now able to use cooked beef for multiple meals (e.g., for a roast and then a stew), whereas previous beef products were not desirable after one use. Equally as important, the foodservice staff thinks that local beef tastes the best.

“We started a beef to school program five years ago with a food miles lesson in the Agriculture classes. The students researched the miles the food had traveled before reaching the school cafeteria of roast beef, mashed potatoes, green beans, carrots, apple, and a wheat dinner roll. After the lesson, we started sourcing local beef because we knew it was the right thing to do.”



“It takes a team. You have to have everybody on board. If you have a missing link you’re going to have a tough time.”

Recently, a wellness committee established at the school made it a goal to get “more real beef, pork, and chicken products that are recognizable rather than the chicken nuggets or whatever they might be” on to the menu.

Ultimately, support from the school district was key to keeping locally sourced beef in the budget and on the menu. Given the restrictive nature of most school foodservice budgets in the United States, it can be a challenge to fit locally sourced beef into the budget. Support from the Hinsdale School District has allowed the foodservice to prioritize serving local beef and increase the number of meals on the menu that contain local beef.

Connecting with Processors and Producers

Hinsdale School District works exclusively with Bear Paw Meats, a producer and processor establishment located approximately 109 miles to the west of Hinsdale in Chinook, Montana. Bear Paw Meats is a state inspected facility. The relationship between Hinsdale School District and Bear Paw Meats was established with the help of the Montana Healthy Food and Communities Initiative through the National Center for Appropriate Technology. The Initiative provides an online Producer Database that contains information about Montana food producers, processors, and distributors who are interested in selling to institutions (<http://farmtocafeteria.ncat.org/producers/>).

Bear Paw Meats usually contacts the foodservice via phone every other week to take an order. Hinsdale makes the order based upon menu forecasting for how much beef is needed in upcoming recipes. A regular delivery schedule has been arranged to ensure the foodservice is stocked with all of their local beef needs.

Gaining Support for the Beef to School Program

Local beef is marketed in many different ways at Hinsdale School District. Local food products are advertised on a school bulletin board and on a Facebook site (<https://www.facebook.com/hinsdaleoutdoorclassroom>) for the farm to school program and the Future Farmers of America (FFA). Word of mouth, connections within the community, and the passion of the foodservice staff to serve local also help to promote local beef. For example, the school foodservice held a grandparents’ lunch. Grandparents and special guests were invited to eat a lunch with their student where local beef and school garden produce were served.

Education is a large component of supporting beef to school in Hinsdale. Lessons plans that focus on *food miles*, the importance of reducing food waste (e.g., 55% of raw products that American farmers produce is wasted), and composting (e.g., gain hands-on experience with the waste in school) are incorporated into the curriculum. Hinsdale uses a K through 8 curriculum that specifically focuses on the process of raising cattle for food, the resources and time required for food production, choosing appropriate portion sizes, and reducing waste. As a result, the foodservice firmly believes that students are beginning to understand the value of local food and the importance of food quality.

Type of Beef Used in the Foodservice

Hinsdale’s foodservice receives all beef frozen. They primarily order bulk hamburger and sometimes order hamburger patties and roast beef. Bear Paw Meats packages the bulk ground in 5 pound portions so the foodservice staff is able to pull only what they need for that day’s recipe. These practices allow for easily manageable quantities, and also reduce food waste.

All beef dishes made in the foodservice use recipes that contain local beef. To help process beef, the foodservice program purchased a meat slicer to assist with preparation of recipes. Since beginning to use local beef five years ago, foodservice staff are now able to use one cut of beef for multiple recipes. For example, leftover roast beef is used in a stew or for barbeque beef sandwiches. Similarly, leftover taco meat is used for the baked potato bar and bones are used to make stock. All leftovers are frozen before reuse to help ensure food safety.

Beef to School Costs

The cost of local beef is paid through the Hinsdale School District foodservice budget or general school fund. The foodservice director recognizes that local beef is a costly piece of the budget. Produce that is donated from the school’s garden and greenhouse helps to save money on vegetables entering the kitchen which offsets the cost of local beef. The school foodservice has also written grants, primarily focused on vegetables, to increase their access to local products. Through the support of the school district, local beef is served at lunch even in times that the budget is not met.

Sustaining a Beef to School Program

Hinsdale School District considers several factors key to sustaining local beef in the school cafeteria:

- Work with a processor that is state inspected.
- Understand the policies that exist between producers, processors, and schools.
- Ensure access to a refrigerated truck for delivering meat to the school.

- Have the proper equipment to prepare meats in the foodservice.
- All foodservice employees have ServSafe training.
- Practice food safety in serving and sourcing local beef. Ensure the beef is safe to eat by following standard thawing, cooling, storage, and cooking procedures.
- Prioritize purchasing local beef in the budget.
- Develop relationships with key stakeholders (e.g., producers, processors, students, parents, community members) so that everyone feels part of the beef to school program.

The Future of Beef to School

Hinsdale School District sees the future success of their beef to school program through continued education. They believe that emphasizing the importance of consuming sustainable, locally produced and processed cattle throughout the curriculum is paramount to increasing and maintaining support for beef to school. Having full support from each stakeholder in the community is what really matters to the future of beef to school in Hinsdale, Montana.

Stew

Serving Size: 4oz to 8oz

Yield: 120

Montana stewing meat (cooked day before and cooled)	10lbs	
Diced potatoes, cooked	10lbs	
Carrots, cooked	6lbs 8oz	1 can
Celery, diced		4 cups
Tomato Soup	50oz	2 cans
Diced tomato (optional)		1 can
Garlic		1 tbsp
Basil		1 tbsp
Sugar		½ cup

Au Jus Mix (if needed) 1 gallon ¾ cup mix

2 steam tables – temp 6

1. In two steam tables divide the following: stew meat and its juice, potatoes, carrots, tomato soup, diced tomato, garlic, basil and sugar.

2. Cook celery until tender. Add celery and water to steam tables.

*If more liquid is needed – make Au Jus.



Lower Valley Processing
Kalispell School District
Somers Lakeside School District
Whitefish School District



BEEF TO SCHOOL AT LOWER VALLEY PROCESSING



Cattle Inventory in Flathead, Lake and Lincoln County

Flathead County: 2015 Cattle Inventory: 8,000

Lake County: 2015 Cattle Inventory: 40,000

Lincoln County: 2015 Cattle Inventory: 2,200

2014 Human Population

Flathead: 92,373

Lake: 28,987

Lincoln: 19,455

Processor Inspection Status

State Inspected Facility



Who is Lower Valley Processing?

Lower Valley Processing, Inc. is a family owned meat processing facility located a few miles south of Kalispell, Montana. The Plummer family has operated their business since it opened in 1974. Chuck Plummer founded the business as a moonlighting operation to his day job as a meat department employee in a local grocery store. The business has since outgrown its humble beginnings and it continues to grow. The buildings that house the operation tell the story of success and growth, one expansion at a time. Current family members involved with the business include Chuck and Sylvia (1st generation), Wes and Sue (2nd generation), and Jeremy and Janell (3rd Generation). One of the recent growth areas has been processing meat for K through 12 school districts.

Business Model

The family owned processor works with a range of clients in the Flathead Valley to process their meats. Lower Valley has approximately 80 clients in about a 50-mile range. They deliver two days a week; fresh meat and processed products to clients such as restaurants, small grocery stores that want to sell local products, bars, convenience stores, and schools. Some Lower Valley products are available in gift shops and tourist establishments, such as snack sticks and jerky.

The range of clients is, in part, determined by the processor's resources. Lower Valley Processing can produce a wide range of products depending on the customer's needs. In addition to the traditional cuts (burger, steaks, roasts, ribs, etc). Lower Valley Processing can make sausage, pepper sticks, sliced jerky, formed jerky, pepperoni, salami, polish, bologna, wieners, and hamburger patties. They can also smoke turkeys, geese, fish, and cheese.

Lower Valley's core business is custom processing animals for its clients. Many local ranchers who have animals processed for personal consumption are long-term customers. Products are often tailored to clients, such as small restaurants making ethnic food or pizza toppings. Big game hunters keep things busy in the fall and

require the processor to hire additional crew members during the fall. Previously, a reefer semi-trailer was rented mid to late summer to provide extra freezer space for 4H animals from surrounding county fairs and sales. This past spring, they constructed a 30x50 foot 'Turbo' freezer building to accommodate their growing customer base and storage needs. A number of clients who raise animals (cattle, pigs, lamb, elk and buffalo) and market their meat utilize Lower Valley for the processing of their animals. The processor's business also increases along with the tourist season in nearby Glacier National Park.

In addition to processing client's animals, Lower Valley Processing purchases and processes animals to sell directly to local restaurants, bars, individuals, several local K-12 schools, and occasionally day-cares. Beef to school has helped to grow Lower Valley Processing's fresh beef market. The processor sets aside small quantities of fresh beef for restaurants as it prepares larger quantities of bulk hamburger for local schools.

Production and Processing

Lower Valley Processing is a state-inspected meat processing facility, allowing the business to market its products anywhere in the state of Montana. Lower Valley Processing offers clients a wide range of processing services. The business slaughters animals one day per week and processes during other days of operation.

A typical week includes processing 18 head of cattle and up to 40 head of pigs and lambs, though there are seasonal fluctuations. They also process domestically raised buffalo and elk. During hunting season, Lower Valley processes deer, elk, antelope, moose, and bear. Hunting season requires slightly different employees and some processing is partitioned from the commercial work space.

Lower Valley also purchases live animals, processes the animals, and then sells the meat to food establishments and private parties. These cattle are usually between 18 and 24 months old, though older cull cattle play a significant role in ground beef sales.

Beef to School Program

History

Lower Valley has been working with area schools in the Flathead Valley for about 10 years. In 2011, Jenny Montague with the Kalispell School District contacted Lower Valley Processing about possibly purchasing local beef for use in the school lunch program. The cost of meat was a concern for the schools. As a way to keep prices reasonable, Lower Valley Processing and the school created an innovative approach to provide local beef to schools. Area ranchers often haul older animals (5 to 10 years of age) that are being "cullled" from the herd to Missoula, the closest livestock auction facility. This 90-mile one-way trip down the busy Highway 93 is time consuming and somewhat costly, especially when hauling only one or two animals. Lower Valley Processing started contacting local ranchers to ask if they would sell cull cows at a favorable price to Lower Valley rather than haul them to Missoula. Many ranchers were willing to change their operation, which helped to increase the beef to school program in a big way.

School Partnerships

Lower Valley Processing had approximately 10 school accounts during the 2015 through 2016 school year. They sell schools bulk ground beef for prepared dishes such as tacos, spaghetti, and meatballs, as well as beef burgers. Lower Valley Processing adds soy to some of the schools' burgers to increase nutrition and portion size and decrease the price.

In 2015, Lower Valley Processing delivered 30,000 pounds of ground beef (bulk and patties), 3,300 pounds of Polish sausage – which is 80% ground beef – and 2,400 pounds of breakfast links to the Kalispell school district. Many schools purchase pork links and bulk sausage for breakfast, some made from beef and others from pork. Lower Valley also offers a lean, skinless hotdog to the schools. Occasionally, the schools have special meals and order different meat products than their usual orders.

“We started out small with a few boxes of burgers. Did it seem worth it? I don’t know. We talked about the value of beef to school in the beginning. What it’s grown into now, it is worth it!”

Why Build a Beef to School Program

Lower Valley Processing enjoys the feedback that they have received from the beef to school program. They notice that everyone in the beef to school partnership perceives the benefits, including students, parents, school staff, the producer, and the processor. For example, Jeremy Plummer states, “When I pick up my kids at Bigfork School, people regularly thank us for the beef in our lunch. The community gets to know us and our product.”

The community particularly is supportive of the local aspect of the program because everyone can see cattle treated humanely throughout the process and the money circulating locally. Lower Valley Processing opens their doors to the public through field trips and tours. After a school field trip, students bring their families back to Lower Valley to learn about where the school’s meat comes from. Word of mouth in the community about the benefits of beef to school has increased Lower Valley’s success.

Lower Valley Processing explains that there are many benefits to paying for a higher quality beef product and all beef to school stakeholders notice it. Healthy cattle are selected for processing just days before the beef is delivered to the school. The beef comes from a single animal and is delivered fresh and never frozen. The beef is usually cooked that day and consumed by the end of the lunch.

How to Connect with Schools

The beef to school program started small and grew exponentially after making connections with the school foodservice director at the time, Jenny Montague. Lower Valley’s work with schools began with just a few boxes of burgers and optimism that they were moving in the right direction. That optimism was rewarded with the success of working with several different schools to provide hundreds of pounds of beef per week in the Flathead Valley. Schools usually begin by sourcing a smaller amount of beef and then increase their orders as their program grows. Lower Valley thinks that building a relationship with the school district and kitchen is essential to beef to school processes.

When initially connecting with the Kalispell School District, the foodservice director brought cooks and other staff to review Lower Valley’s facility and to build a process and relationship. Montague devoted time to converting the processor’s cost per pound to a price per serving figure that would meet the school’s budget. Jeremy

Plummer and Jenny Montague worked to build a product that met serving size and nutrition requirements, specifically fat content.

School districts text Lower Valley their orders on Friday for Tuesday delivery. Because the student numbers are consistent, it is easy for the processor to plan for the hundreds of pounds of beef deliveries that are spread across the Flathead Valley. It helps that Kalispell School District, one of their largest customers, receives most of their meat in a central kitchen and then distributes the prepared products to a number of schools. Occasionally there are delivery dates, time changes, or new schools that Lower Valley is able to manage without difficulty.

When schools submit their orders, Lower Valley Processing calculates how many animals will be needed to fill the order. Jeremy then contacts local ranchers to purchase cull cows. Lower Valley Processing buys approximately two cull cows per week and pays the ranchers based on the current trim meat price per pound multiplied by the pounds of meat that particular animal produced. Lower Valley adds their processing fee to this price to determine the price to the schools. The animal carcass is removed from the hanging cooler and processed the day before it is delivered to the schools. The products to be delivered to schools are weighed and ready to go on a regular schedule during the week.

Lower Valley markets their beef to school program by educating students about the benefits of beef through field trips. Field trips are usually conducted with second to fourth grade students. The students visit a farm, see where cattle is raised while on a hay ride, and then visit the processor. Students understand the beef production process through the field trip. Schools also notify students and parents through menus and newsletters when beef from Lower Valley is being served and also celebrate Parents’ Burger Day in the cafeteria.

Beef to Schools Costs

Lower Valley sets prices based on the Montana market for cow and bull trim provided by the Missoula Stockyard and White’s Meats. Lower Valley communicates price changes with the schools beforehand.

The processor cannot compete with the prices of larger commercial distributors and notices that the schools’ budget limits all schools from buying beef locally. Lower Valley tries to keep the price of beef as consistent as possible for schools that provide large volume orders consistently. Some schools place orders less frequently due to budget constraints. All schools that collaborate with Lower Valley note that price is higher for beef through Lower Valley, but the product is higher in quality.

Beef to School Program Needs

The processor did not need to make many significant changes

when it began selling to schools. Lower Valley was already a state inspected facility when it began selling to schools, with HACCP plans in place, documented sanitation practices, and inspected and approved methods.

When business with the schools increased, the processor bought a new automatic patty machine that was faster, more efficient, and could size the patties more accurately to the school’s specifications. This new machine can grind and process 200 pounds at a time and stack the patties with wax paper so that the worker running the machine only boxes the meat. The processor has purchased a refrigeration truck to meet rising demands. All of the new equipment benefits beef to school and other accounts.

The beef to school program has required more labor with a quarter to half of one employee’s time focused on these contracts. Additionally, the processor has had to grow and rearrange the facility’s cooler and storage spaces.

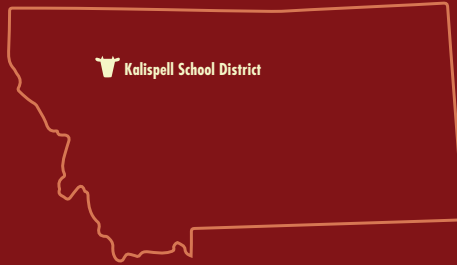
A good relationship with area livestock producers as well as another local processing plant has been key to Lower Valley’s success. If Lower Valley is ever short on beef supply, they turn to another local processing company, White’s Wholesale Meats, to help fill the order. Lower Valley Processing looks a year ahead to supply schools with their beef needs. That requires good communication with livestock producers as well to grow incrementally. As other schools may begin to make purchases, Lower Valley welcomes the challenge of meeting the supply needs, “Even if business doubled in six months we would be able to absorb the growth. Gladly.”

The Future of Beef to Schools for Lower Valley Meats

In recent years, schools, producers, and Lower Valley have developed a symbiotic relationship. Rather than going to the livestock auction right away, local producers keep cull cows for a few weeks in anticipation that Lower Valley may purchase the animal. Schools place orders for beef needs for one to two weeks. Lower Valley then coordinates the school’s needs, with the supply from local ranchers and ensures that there is processing capacity and delivery to the school in place.

The supply of beef must meet the demand for beef from schools. That is, there must be enough cattle to process into beef and enough students to consume the meat in school meals. With an abundance of beef and a growing marketplace with schools, Lower Valley Processing is positioned to be successful. With the demand for local food products on the rise today, Lower Valley Processing tries to educate other processors about their success in working within school markets.

BEEF TO SCHOOL AT KALISPELL SCHOOL DISTRICT



Schools Involved

Cayuse Prairie School, 193
Cornelius Hedges School, 373
Creston School, 83
East Evergreen School, 418
Edgerton School, 659
Elrod School, 290
Fair-Mont-Egan School, 138
Helena Flats School, 174
Evergreen Junior High, 166
Kalispell Middle School, 1016
Flathead High School, 1474
Glacier High School, 1343

Number of School Lunches Served Per School Day

Approximately 2,500

School foods prepared in

Central kitchen for nine elementary schools (5 in district and 4 contracted outside of district)
Conventional kitchens for one middle school and two high schools

Foodservice Staff in Case Study

Interim Foodservice Director – Lorie Hafer (2015-2016)
Previous Foodservice Director – Jenny Montague (2011-2015)
FoodCorps Service Member – Whitney Pratt

School Lunch Participation Rate

Flathead County (2014) – 40.45%

Local Beef Dishes Served

Hamburgers
Beef lentil chili
Beef gravy
Burritos
Cheesy noodles with beef
Goulash
Marinara meat sauce
Sloppy joes
Salisbury steak
Stroganoff
Tacos

School Demographics

Kalispell School District is located in Kalispell, Flathead County, Montana. The district consists of 12 schools, including Cayuse Prairie Elementary School, Cornelius Hedges Elementary School, Creston Elementary School, East Evergreen Elementary School, Edgerton Elementary School, Elrod Elementary School, Fair-Mont-Egan Elementary School, Helena Flats Elementary School, Evergreen Junior High Middle School, Kalispell Middle School, Flathead High School and Glacier High School. In 2015 through 2016, enrollment ranged from 83 to 1474 students. During the same school year, Kalispell School District served nine elementary schools (five in district and four contracted outside of the district) through a central kitchen located near Kalispell Middle School, and utilized conventional kitchens for one middle school and two high schools. Approximately 2500 meals per day were served in 2015 through 2016. In 2014, 40% of students participated in the school lunch programs across Flathead County.

vice member Whitney Pratt. Whitney has been at the district since the fall of 2015, working with Lorie to help connect students with healthy foods. Prior to her position with Kalispell, Whitney served with FoodCorps in Bigfork, Somers, and Cayuse Prairie. Jenny Montague was the foodservice director from 2011 through 2015 and built the foundation for farm to school programming in the district.

Beef to School Program

History

When Jenny Montague started as the Kalispell Public School foodservice director, she wanted to build a strong farm to school program within the foodservice department. Serving local beef was one of her priorities. With the help of a FoodCorps service member, they contacted local beef producers and processors to determine if these vendors could provide the products and quantity that the school district needed at the right price. Through market research, Montague determined some of their specifications had to change to accommodate what was available locally, such as the ability to accept fresh hamburger patties rather than the individually quick frozen (IQF) patties that the foodservice accepted previously.

The foodservice started purchasing beef from Lower Valley Processing in spring 2012 on a limited basis to create smooth processes for ordering, delivery, and preparation. Lower Valley Processing is a family owned state inspected meat processing facility located a few miles south of Kalispell. In fall 2012, the local beef from Lower Valley Processing was placed in regular rotation on the school menu. In the fall of 2012, a precooked beef and lentil crumble from Mission Mountain Food Enterprise Center in Ronan were also added to the menu. Lorie Hafer stepped into the interim foodservice director po-

sition in 2015 and continued purchasing local beef among many other Montana grown and processed products. Today, Jana Graham is foodservice director and continues to support beef to school.

In addition to purchasing the majority of their beef from Montana sources, Kalispell Public Schools foodservice also supports a robust farm to school program that includes fruits, vegetables, grains, dairy, and other meat products. Their staff enjoy incorporating local foods into dishes such as beets in chocolate cake, squash in chili, and zucchini into muffins. Due to the size of the school district, the foodservice is able to use their purchasing power to have businesses create and offer products to the foodservice's specifications.

What is Local Beef?

Kalispell Public Schools Foodservice finds that a flexible definition of "local" is important. Lower Valley Processing is located approximately 10 to 20 miles of each of the schools. The foodservice staff tries to reduce *food miles* and keep the food chain short.

Why Local Beef is Used in the Foodservice

The foodservice staff at Kalispell Public Schools are committed to purchasing beef locally for many reasons including that:



“When I started this job, it was part of our mission and vision to create a foodservice department with a strong farm to school program, and I feel we have done that.”

Lorie Hafer was the interim foodservice director of the Kalispell School District. Previously, Lori held the position of assistant foodservice director for the district from 2012 through 2015. The school has an emphasis on farm to school programming and hosts FoodCorps ser-

“ I think the most important part is building relationships with producers and processors, and being flexible and solution-oriented. There will always be reasons not to move forward to doing something, but if it is a priority, there will almost always be solutions as well. ”

- it is a higher quality product than what they used in the past;
- the cattle have been raised in more humane conditions and are higher quality by being grass-finished rather than finished in a feedlot,
- it is more visually appealing,
- it tastes better,
- it represents local support to students and staff,
- purchasing from local vendors reduces *food miles* and shortens the food chain by simplifying the process from producer to consumer,
- they are proud to keep money within their community's economy.

Initially, foodservice staff were not necessarily supportive of the switch to the local products. However, the staff have become the strongest advocates for the beef to school program despite the additional logistics and time it takes to order and prepare.

While the foodservice staff believes the local products are superior, they have found that the patties to be less consistent than other non-local beef products. For example, one shipment appeared pink despite being cooked above necessary temperatures to ensure food safety. The foodservice then educated students and staff about why the local products were less consistent depending on production and processing method and that this batch was safe to eat, despite its color.

When the district started purchasing local beef the overall acceptance of the meals increased, especially when coupled with the education and marketing efforts within the district in cooperation with FoodCorps service members. Teachers and other school staff have taken notice as well and comment on the appealing aromas of the local beef product cooking for lunch. They are more likely now to eat school meals. While students do not comment on the taste difference of local beef, they do note the appearance of the local product is more appealing since they can identify the beef in meals.

Parents and community members also value the foodservice's efforts to purchase local beef. Lower Valley Processing is a well-known local business and the community responded positively when the schools began purchasing their products.

Connecting with Processors and Producers

The school foodservice staff intentionally took time in the beginning to work with Lower Valley Processing and later Mission Mountain Food Enterprise Center to create a purchasing and delivery system that worked and ensured that the products met the foodservice's specifications. They believe this foundational work paved the way for their current strong relationships. They trust their vendors to provide high quality and safe products. Both processing facilities are willing to change products to fit the district's needs and regularly communicate and make adjustments as necessary. The foodservice staff believe that flexibility and communication is crucial when developing and maintaining relationships with new vendors.

Kalispell Public Schools foodservice does not coordinate directly with ranchers and allows Lower Valley Processing and Mission Mountain Food Enterprise Center to source the cattle. Lower Valley Processing primarily sources the cattle from ranches in the Flathead Valley and from White's Wholesale Meats, a processing facility located in Ronan, Montana. In one instance, the school's FFA (Future Farmers of America) program was selling their beef to Lower Valley Processing. The foodservice worked with Lower Valley to be able to bring that beef back to the school.

Each kitchen in the Kalispell Public School system orders via email, phone, or text message and receives the beef weekly from Lower Valley Processing. The current system allows flexibility for the different schools to meet the preferences and needs of the students served. Lower Valley Processing will occasionally contact the schools to check on orders for the week. Lower Valley Processing delivers once, in some cases twice, per week using a refrigerated delivery truck. The processor purchased an additional refrigerated delivery vehicle to be able to meet increased demand from the schools and other customers. Purchasing from Mission Mountain Food Enterprise Center occurs on a less regular basis as the lentil-beef crumble is delivered frozen and is more easily stored for future use.

The foodservice purchases other meat products beyond beef. For one school year, the foodservice served Montana sausages that were procured through the Office of Public Instruction's Cooperative Purchasing Program of USDA Foods, but due to vendor supply and delivery issues this product is not currently available through this program.

Gaining Support for the Beef to School Program

Initially the foodservice did not market farm to school initiatives, and therefore the changes largely went unnoticed. Since then, communicating and marketing farm to school initiatives, including local beef purchasing, has improved the foodservice's reputation. Currently, the school designates local beef and other local food on the school

menus. Additional signage is also available in the school. Further, local news media have covered the district's progress and social media pages are used whenever possible to increase outreach. The district also maintains pages about farm to school (<http://www.sd5.k12.mt.us/Content2/706>) and FoodCorps projects (<http://www.sd5.k12.mt.us/Content2/704>) on their website.

The school participated in the Montana Harvest of the Month program pilot (www.montana.edu/mtharvestofthemoth) which features different Montana foods each month, including beef, in school meals, educational activities, and taste tests. This program has helped them more easily market the local foods, so more students and parents take notice. The students enjoy "beef month."

In coordination with teachers, the district's FoodCorps service members provide educational activities such as lessons, skits, and field trips to discuss why the foodservice buys local beef and how this action impacts the environment and economy. The field trips to Lower Valley Processing have been well received by parents and students alike. These experiences also increase the recognition of the local beef offered in the school meals program.

Type of Beef Used in the Foodservice

Kalispell Public School Foodservices purchases approximately 18,000 pounds of beef per year which includes raw beef hamburger patties from Lower Valley Processing, raw ground beef, precooked beef-lentil crumble from Mission Mountain Food Enterprise Center, local beef hotdogs, precooked beef crumble from the USDA Foods program, and will order additional beef and other meat products on an as-needed basis from local and non-local sources.

Hamburger patties consist of the majority of the beef purchases, especially since hamburgers are served most days as an a la carte



“Just do it. Try it once. And then see if you can make changes that make it easier the next time, until it becomes something that you can implement regularly. All systems take time to develop.”

option at the high school. The hamburger patties are separated by paper and are in quantities of 64 patties to a box. The meat from Lower Valley is delivered fresh, and once received is stored in the freezer if not used immediately. The district prefers to receive the hamburger patties fresh so they are easier to separate and prepare. The foodservice adjusted procedures and increased food safety training to ensure staff were handling and cooking the raw product properly.

The crumble is delivered frozen in sealed 5 pound bags within boxes. The foodservice finds the USDA Foods precooked beef crumble is convenient since it is easy to prepare and handle. Further, the high school offers several meal options each day, therefore increasing labor to prepare several dishes. The crumbles provide an easy and cost effective way to maintain choices or have a backup in the event of other product shortages.

Beef to School Costs

Price is an important consideration for the foodservice. While setting up purchasing with Lower Valley Processing in 2012, the foodservice staff compared pricing from local and non-local sources. The district does not negotiate a long-term price with its beef vendors, but works with the vendors to ensure that any price changes still are competitive and within the foodservice's budget. The foodservice also utilizes USDA Foods precooked beef crumbles to maintain their budget. The school district has maintained a smaller sized hamburger patty as a cost control method, even after the previous maximum daily serving size requirement for protein was removed from National School Lunch meal pattern requirements. The foodservice balances costs by pairing more expensive items such as the local hamburger patties with less expensive items such as USDA Foods sliced carrots within a meal. They also cut costs by using their staff's creativity to add less expensive ingredients to meals (e.g., lentils to beef chili). The school foodservice has further reduced costs by reducing the amount of some of more expensive pre-processed items.

In 2012, Kalispell approved a bond request that included a new kitchen and with it, new equipment and added storage. The new kitchen and equipment has helped increase scratch cooking, which allows the foodservice to use more local products including local beef. Lower Valley Processing received a grant through the Montana Department of Agriculture that supported the purchase of a patty making machine that was able to make the smaller patties needed by the

Kalispell Public Schools foodservices. Later, the company had to purchase an additional refrigerated delivery vehicle to keep up with the demand and delivery schedules.

Sustaining a Beef to School Program

Kalispell School District considers a few logistical factors as key in keeping local beef in the school cafeteria.

- With the current weekly ordering and delivery schedule, the school foodservice finds their cold storage space adequate. If the foodservice purchased larger quantities from vendors to take advantage of sale pricing, more storage space would be necessary.
- Food safety is of utmost important to the Kalispell Public Schools foodservice. When establishing the relationship with Lower Valley and Mission Mountain Food Enterprise Center, the foodservice director visited the sites and discussed the practices and records with the Montana Department of Livestock inspector. The foodservice changed the HACCP plan to ensure safe handling, storing, and preparing procedures reflected the use of raw unfrozen beef. Further, most of the foodservice staff and all of the cooks receive ServSafe training.
- Proper delivery and receiving is important to maintaining food safety and the foodservice works with its vendors to create and maintain such practices. The foodservice staff feel confident in the safety the of the local products since they can easily verify the practices and inspection records of their local vendors.
- Having vendors aware of the National School Lunch Program meal pattern requirements has helped the Kalispell Public Schools foodservice. For example, Mission Mountain Food Enterprise Center formulated the lentil-beef crumble to help schools meet the legume requirements while incorporating Montana-grown products.
- The logistics of procurement, processing, delivery, and pricing are the main challenges to serving local beef. The district's size may be an advantage and allows them to be more flexible with their budget and have more purchasing power. However, it can be difficult to procure the quantity of local foods in general needed to feed their students. The foodservice has found locating producers that have a consistent supply can be challenging.

The Future of Beef to School

Kalispell Public Schools has a strong system in place and are proud of their local beef purchasing program. They are seeking more opportunities to use local beef in scratch cooking, increase the amount of

local beef served, and incorporate other foods (mushrooms, lentils, bison) in beef recipes to cut costs and increase variety.

The foodservice encourages schools to try a new vendor or food on a small scale to work out the kinks. Further, open communication and flexibility is important when establishing and maintaining relationships, especially while working out challenges.

Marinara Meat Sauce

Serving Size: 4oz	Yield: 50
Montana ground beef, raw	8 ½ lbs
Onions, raw, chopped	1 ½ cups
Garlic, raw, minced	2 cloves
Tomato sauce	#10 can ¾ can
Sweet potato, canned, mashed*	#10 can ½ can
Tomato paste, no salt	1 qt
Water	½ tbsp.
Salt	2 tbsp
Parsley flakes, dried	¼ cup
Basil, fresh, chopped	2 tbsp
Oregano leaves, dried, ground	1 tbsp
Marjoram, dried	½ tbsp.
Thyme leaf, dried	1 tsp
White pepper, ground	

1. Brown ground beef. Drain excess fat.
2. Add onions and fresh chopped garlic. Cook until vegetables are translucent, stirring occasionally.
3. Add tomato sauce and paste. Puree sweet potatoes (can substitute cooked squash cubes) in a good processor until smooth. Add sweet potato puree to sauce. Measure dry spices and herbs in a separate bowl and combine well. Stir spice blend into sauce thoroughly and bring to a simmer. Add water. Sauce should be fairly thick. (May add more water if a thinner sauce is desired)

*Substitute yellow or orange winter squash puree, ie. butternut or acorn, for sweet potatoes

BEEF TO SCHOOL AT SOMERS LAKESIDE SCHOOL DISTRICT



Schools Involved

Lakeside Elementary School, 350
Somers Middle School, 172

Number of School Meals Served Per School Day

Approximately 420 breakfasts and lunches

School foods prepared in Central Kitchen

Foodservice Staff in Case Study

Foodservice Director – Robin Vogel
FoodCorps Service Member – Maddy Halverson

School Lunch Participation Rate

Flathead County (2014) – 40.45%

Local Beef Dishes Served

Hamburgers
Mushroom Beef Meatballs



School Demographics

Somers Lakeside School District is located in Somers, Flathead County, Montana. The district consists of two schools including Lakeside Elementary School and Somers Middle School. In 2015 through 2016, enrollment ranged from 172 to 350 students. Somers Lakeside School District foodservice prepares foods for both schools from a central kitchen located at Somers Middle School. Four hundred and twenty meals were served on average per day. In 2014, 40% of students participated in the school lunch programs across Flathead County.

Robin Volger has directed the Somers Lakeside School District foodservice since 2005. Her background in foodservice includes work in restaurants, as a private chef, and stints in school foodservice in Wyoming. Robin also teaches nutrition classes and is the wellness program coordinator. The school has an emphasis on farm to school programming and hosts a FoodCorps service member, Maddy Halverson. Maddy has been at the district since the fall of 2015 working with Robin to help connect students with healthy foods. FoodCorps service members connect kids to healthy food in schools by focusing on hands-on lessons, healthy school meals, and creating a school-wide culture of health.



History of Beef to School Program

History

Back in 2006, when the current Somers and Lakeside foodservice director began her new job, the USDA issued a beef recall for a large portion of the beef that had been distributed through the USDA Foods program. This was the key event that made the foodservice director think, "This is silly that we're getting meat from USDA when we live in a beef growing community and state." She connected with a rancher with students enrolled in the school district and received the school's first local beef. The culled cow was processed at White's Meat and purchased as ground beef to serve in the cafeteria as hamburgers.

Somers and Lakeside focuses on building a successful farm to school program by working with ranchers, farmers, the Western Montana Growers Cooperative, and their own school garden. Robin, Maddy, and other staff work together with students to cultivate a successful farm to school program, which includes sourcing beef from local farmers and maintaining school gardens.

What is Local Beef?

Somers and Lakeside foodservice prefer to source Montana products. Some products, such as yogurt, come from Washington. Given the proximity of Somers and Lakeside to the state border, many regional foods are more local than Montana foods that are available across the state.

Why Local Beef is Used in the Foodservice

Robin Vogler explains her commitment to farm to school at Somers and Lakeside foodservice, "We're going to continue to provide fresh and local. It's the best way to eat. We're creating a lifelong eating habit. I just believe strongly in farm to school. I think that it's catching on, even places that have less availability than we do. When kids turn on to fresh food, they don't want to go back. So, when you start feeding them well, they know the difference."

At first, the school board scrutinized the increased expense of local beef purchases as compared to other non-local beef available through USDA Foods or national foodservice distributors. However, generating support from community members, parents, and students helped to mitigate the board's concerns. Community members remain invested in the beef to school program because it supports ranchers whose children attend the school and, in turn, bolsters the local economy.

"When kids turn on to fresh food, they don't want to go back. So, when you start feeding them well, they know the difference."

The foodservice uses both local beef and non-local beef available through USDA Foods or national foodservice distributors. They observe that local beef cooks better, without as much fat and water content as other non-local beef products. The foodservice additionally notes that the quality of non-local beef has improved over time.

Today, the foodservice purchases local hamburger patties or other beef products processed at Lower Valley Processing in Kalispell, Montana when it fits within the budget, usually once per month. Students provide positive feedback about the local burgers and other beef dishes. Local beef tends to be a favorite menu item for these Montana students, "When kids turn on to fresh food, they don't want to go back. So, when you start feeding them well, they know the difference."

Connecting with Processors and Producers

Initially, the foodservice worked directly with a rancher to purchase local beef. The foodservice realized that they used primarily ground beef and did not need all cuts of beef provided from one cattle. As such, the foodservice began working through White's Wholesale

Meats in Ronan, Montana and Lower Valley Processing. The processors were able to sell the school individual beef products and market other beef cuts to additional customers.

Currently, Somers and Lakeside Schools primarily work with Lower Valley Processing because the processor has a patty machine that can produce hamburger patties in the portion size that meets student's nutritional needs, fits the foodservice's budget, and reduces food waste. The foodservice orders hamburger patties when needed. Lower Valley Processing has a frequent and regular delivery schedule for the school, which is critical as the foodservice generally receives fresh, never frozen, meat.

Students at Somers and Lakeside have visited Lower Valley's processing facility for field trips to further deepen their understanding of the local food system and Montana's beef industry.

“We're going to continue to provide fresh and local. It's the best way to eat. We're creating a lifelong eating habit.”

Gaining Support for the Beef to School Program

Marketing and education are critical to the continued visibility of the beef to school program in the community. Successful marketing strategies include highlighting Montana beef on the school menu when it is served and verbally communicating to students when they are eating locally. Robin Vogler describes, “I make sure that we tell the kids in the serving line that this is yummy Montana beef and ... try to build excitement that way and make them proud of where they come from.”

The Montana Harvest of the Month program showcases Montana grown foods in Montana schools and communities and focuses on beef during one month of the year. Classroom education and taste tests during Montana Harvest of the Month's beef month provides an avenue for the student body to focus on learning about local beef and the foodservice to publicize local beef in the cafeteria.

FoodCorps service members have played an instrumental role in educating the student body about local foods, including field trips and lessons that incorporate the nutrition standards. Students learn what beef does for the human body, how to eat healthy proteins, and then incorporate their knowledge in the lunchroom. The 2015 through 2016 FoodCorps service member Maddy Halverson has “really helped fill the educational void” about farm to school.

Maddy Halverson describes one example lesson taught to first, third, fourth, and fifth graders, “We did a lesson about what cows eat and then going through their digestive system, about the four different cow stomachs and they get to act it out and...so there's a water component, the bacteria has a water bottle and squirts water onto a piece of paper and the stomach has to crumple it up and break it down. When they squeeze out all the water, all the water represents the nutrients and things from the grass that the cow's going to use to create meat and dairy and so kind of getting that idea of grass comes into the cow, makes the meat, and the dairy, and then we get to benefit from that.”

This education component plays a big role in linking parents to what happens at school. The FoodCorps service member reports, “I think it's useful if the lesson I teach is really engaging and exciting and the kids will go home and tell their parents, ‘I learned about cows eating grass today,’ and the next time they come in they'll be like, ‘I told my parents and this is what happened.’” She also shared that local beef education also gives students a sense of pride about Montana foods.

Type of Beef Used in the Foodservice

In the past, the foodservice director at Somers and Lakeside purchased 250 pounds of local beef every six weeks. The foodservice ordered local cuts such as steamship rounds for soups and stews, bigger rounds for French dips, ground beef, and hamburger patties. Having skills and capacity for cutting meat enabled Robin Vogler to purchase whole muscle meats at lower cost.

Today, Somers and Lakeside foodservice focus on serving local beef hamburgers once per month to fit within their budget. Occasionally, the foodservice prepares special meals with local beef such as beef and mushroom meatballs or spaghetti sauce. All other beef served in the cafeteria is USDA Foods beef. The hamburger patties from Lower Valley are generally delivered as fresh, never frozen beef, and if she has extra, the patties are frozen for use in the next meal.

The kitchen uses many strategies to make a little local beef go a long way. Some menu items that include local beef have been modified to add a variety of other local products. Adding other foods to local beef recipes extends the number of servings and broadens the nutritional profile of the meals. Lentils make their way into the taco and nacho beef and sweet potatoes wind up alongside local beef in the marinara sauce and chili. The foodservice has also begun experimenting with adding nutrient rich mushrooms as a local beef filler. The foodservice director monitors what students like and tweaks recipes to fit the likes of the student body, “Everybody has different preferences as we go through the ranks. We have pickier kids right now.”

Flexibility in making proteins cost effective has been challenging and Robin Vogler keeps local beef on the menu by being adaptable with prices and products. USDA Foods beef is making a comeback in the kitchen since the quality has reportedly improved and it fits better within the foodservice budget.

Beef to School Costs

The cost of local beef is the biggest hindrance for Somers and Lakeside. The foodservice changes buying practices with fluctuating prices of beef. In the cafeteria, instead of spending more on the value-added products such as a local beef and lentil crumble from Mission Mountain Food Enterprise Center in Ronan, the foodservice opts to make similar own cost effective recipes. The foodservice director decreased buying local beef after the price went to \$3.89 per pound. The cost of beef prevented the FoodCorps service member from doing a taste test for Harvest of the Month beef month.

Robin Vogler has a few ideas for how to afford local beef and local foods in general. Increasing the price of meals is one difficult solution. With 48% of students receiving lunch at free and reduced lunch rates, price increases are difficult to justify with the hardship that would cause for families.

On a larger scale, the foodservice director remarked about policy changes that could help schools purchase more products locally, “I've talked about converting commodity dollars to local purchasing, which would be a big help for us... In terms of policy it would be great for any way that local purchasing could be facilitated through those dollars. I mean really, I can find the growers. That's not the issue for me. I know in some places that is the issue.” An additional policy



Individually Quick Frozen (IQF) Mushrooms

solution for the foodservice would be to increase the rate at which schools are reimbursed for meals. When the Healthy Hunger-Free Kids Acts was passed, the school received a 6 cent increase for reimbursable meals. This increase is helpful but does not make a large impact on the budget due to the small size of the school. Policy solutions take time and support from many levels but would make a big difference in local beef purchases for many Montana schools.

Start small and you pick one product, go out and source it and make it work, and get people excited about it, and add another, and another... and that's the way we've done it too.

Sustaining a Beef to School Program

Somers and Lakeside considers a several factors key to sustaining local beef in the school cafeteria:

- Having the right equipment and enough storage is key. Over the 10 years that this foodservice has been in the Somers and Lakeside kitchens, there have been significant improvements. The schools received several grants for kitchen upgrades that enabled equipment that could be used to cook and hold fresh beef. Storing fresh beef was difficult in the past, but with the addition of upgraded refrigerators there is capacity for ordering and holding enough meat. However, the school continues to use an outdated freezer that maxes out with large orders such as 250 pounds of frozen meat. This piece of equipment is next in line for an upgrade.
- Working with a trusted processor that markets school foodservice compliant products helps. Seeing increasing demand for Montana beef, Lower Valley Processing acquired their patty machine to market 2.5 ounce servings of hamburgers. Additionally, Lower Valley is a state inspected facility that uses best practices for meat processing and food safety.
- The costs of running a foodservice change over time. The costs and revenues do not increase or decrease propor-

Italian Beef and Mushroom Meatballs

Serving Size: 3 pieces

Yield: 87

Montana ground beef, frozen	5 lbs
USDA IQF Mushrooms,	1lb +
Diced, Frozen	13oz
Italian seasoning mix	4 ½ tbsp
Garlic powder	2 tbsp + 1
	½ tsp
Garlic salt	2 tbsp + 1
	½ tsp
Black pepper, ground	2 tbsp + 1
	½ tsp
Dried parsley	2 tbsp + 1
	½ tsp
Onion powder	2 tbsp + 1
	½ tsp
Crushed red pepper flakes	1tbsp
Pan spray	1oz

tionally. For example, when the cost of local beef increases in the market, labor costs to pay foodservice staff to prepare the food do not change. Adaptation has been the name of the game for the foodservice director in making local beef possible.

The Future of Beef to School

Beef to school has received support in the Somers and Lakeside communities, with some pushback from key stakeholders that make decisions about the school budget. Community involvement has been the biggest asset to building a strong farm to school program. The foodservice director said "I think the more support you can find in a community for that, [the better]." Her advice? "Start small and you pick one product, go out and source it and make it work, and get people excited about it, and add another, and another...and that's the way we've done it too."



Oven Temperature & Baking Time: 350°F, 14 min

1. Two Days Prior to Day of Service: Pull ground beef from freezer and place on trays. Date stamp and place trays of ground beef on bottom shelf in the cooler to thaw. Wash hands thoroughly.

2. Day of Service: Pre Prep: Clean and sanitize workstation. Prep: pull thawed ground beef from cooler and place at workstation. Pull Italian seasoning mix, garlic powder, garlic salt, black pepper, dried parsley, onion powder and crushed red pepper from storage and place at workstation. Wash hands thoroughly. Measure out seasoning and place in small bowl.

3. Prep: Open beef and place in floor mixer with paddle attached or in large mixing bowl. Wash hands thoroughly. Add seasoning mixture to the meat. On low, blend seasoning into the meat. Do not overmix.

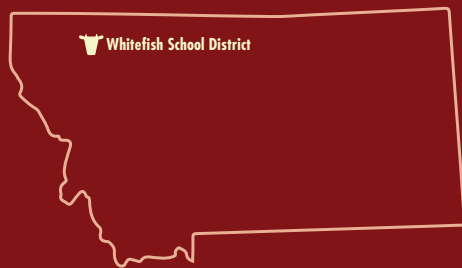
4. Prep: Pull IQF Mushrooms from freezer and place at workstation. Wash hands thoroughly. Measure out the mushrooms needed. Seal and date stamp the remaining mushrooms and return them to the freezer. Add frozen IQF mushrooms to the seasoned meat. On low, fold mushrooms into ground beef. Blend in for 3 minutes do not overmix.

5. Prep: Pull sheet pans and place at workstation and spray lightly with pan spray. Place meatball mix on table to portion out. Wash hands thoroughly and put on gloves. Using a #30 disher, scoop meatballs out and place on sheet pans 6 x 10.

6. Cook: Bake meatballs at 350°F preheated convection oven for 14 minutes or until they reach an internal temperature of 165°F

7. Prep: Spray steamtable pans and place meatballs in a single layer in steamtable pans. Cover meatballs and hold above 135°F.

BEEF TO SCHOOL AT WHITEFISH SCHOOL DISTRICT



Schools Involved

Muldown Elementary School, 651
Whitefish Middle School, 535
Whitefish High School, 480

Number of School Lunches Served Per School Day
600 to 700

School foods prepared in Central Kitchen

Foodservice Staff in Case Study
Foodservice Director – Jay Stagg
School Lunch Participation Rate
Flathead County (2014) – 40.45%

Local Beef Dishes Served

Chili
Marinara Sauce
Hamburgers, Swiss and Mushroom Burgers
Sloppy Joes
Tacos

School Demographics

Whitefish School District is located in Whitefish, Flathead County, Montana. The district consists of three schools, including Muldown Elementary School, Whitefish Middle School, and Whitefish High School. In 2015 through 2016, enrollment ranged from 480 students at Whitefish High, 535 at Whitefish Middle, and 651 students at Muldown Elementary. During the same school year, Whitefish School District served all schools from two central kitchens, one located at Muldown Elementary School and one located at Whitefish High School to approximately 1600 students. Between 600 and 700 meals were served per day on average. In 2014, 40% of students participated in the school lunch programs across Flathead County.

Whitefish School District foodservice has been directed by Jay Stagg since 2008. Jay built his foodservice skills by working in the foodservice industry for 25 years prior. The school district has a strong farm to school program supported by the community, with a garden built in the former baseball field and a greenhouse donated to the school through a private funder.

History of Beef to School Program

History

Local beef use in Whitefish Schools began due to curiosity of Jay Stagg. The foodservice director stated that he “started reading about where beef was coming from” had some concerns during his research, and then started to investigate the local beef supply chain. He took the opportunity to find out who was involved locally in cattle operations and where and how animals were being produced and processed.

During 2012, the Jay Stagg purchased one cow and had it processed at Lower Valley Processing in Kalispell, Montana to experiment with using local beef in the foodservice. Four years later, in 2016, White-

fish plans to purchase five head of cattle for processing, or an estimated 3000 pounds. It is the first time that the foodservice will purchase and serve almost all local beef in the school cafeteria.

What is Local Beef?

Whitefish School District sits in a hotbed of agricultural activity within the state of Montana, allowing 100% of their local purchases to be made from within the Flathead Valley. All beef is purchased from Flathead County currently and the foodservice would consider purchasing from other locations in Montana if necessary. Jay Stagg mostly works with Lower Valley Processing, a state-inspected facility, to process and deliver meats. State or federal meat inspection of the processing facilities is required for schools to source meats.

“I think everyone’s allowed to define [local] how they want... all of our beef has come within our valley, within our county.”

Why Local Beef is Used in the Foodservice

The foodservice purchases local foods, including local beef, to support the Flathead economy by circulating resources locally, to protect the environment through decreasing fossil fuel use in transportation, and largely because the taste and quality is better.

The foodservice is able to make custom orders through Lower Valley Processing that impact product quality. For example, Lower Valley controls the fat content of the beef that they market and sell to schools. Flavor is another major driver of using local beef at Whitefish Schools, reportedly exceeding the taste of USDA Foods beef. The foodservice director is interested in comparing the volume and weight of finished local beef product with USDA Foods beef.

Connecting with Processors and Producers

Lower Valley Processing was identified as the ideal partner for Whitefish’s beef to school program because of their proximity and flexibility. By utilizing the same processor for the past four years, Whitefish Schools has developed a great working relationship with Lower Valley Processing, “They know what you want and how you want it and how you want it packaged, so when I do have stuff, there’s not a lot of discussion.”

Once an animal is purchased, it is sent to Lower Valley, processed, and delivered frozen to the foodservice. Lower Valley Processing is flexible with delivery times, works with the school foodservice schedule, and calls to ensure someone will receive a delivery.

Whitefish School’s sources of beef are constantly changing. Connections with ranchers have been made by word of mouth, which is consistent with other beef to school programs in Montana. After initially serving local beef in schools and working with a few ranchers, other





local ranchers seeking to locally market cattle began to approach the foodservice. Most of the ranchers that Whitefish has worked with are very small, having between five to 15 head of cattle, Whitefish Schools has not worked with larger ranchers who primarily sell to conventional markets.

Because of the size of the school, the foodservice is able to prepare enough raw ground beef product to feed students. Jay Stagg stated that if the foodservice “was to get any bigger and had to do more, then [he] would buy more from Mission Mountain.” Mission Mountain Food Enterprise Center (MMFEC) is a food hub that processes local foods into value added products, easing the strain on kitchen capacity for processing locally grown foods. The facility markets a precooked local beef and lentil crumble to school and institutions in Montana. Whitefish has purchased value added products from MMFEC in the past, and they have worked together to create and test value added products.

Gaining Support for the Beef to School Program

Marketing and education have played a significant role in promoting Whitefish’s beef to school program. Local items are highlighted and the product’s origin is described at the bottom of the school menu. The foodservice director describes that the practice “just putting an underline under the item on the menu... and a little explanation off to the side saying ‘All underlined items have been [grown] within a hundred miles’.”

Type of Beef Used in the Foodservice

The entire processed cattle arrives to the kitchen frozen in five or 20 pound packages, typically 500 to 600 pounds at a time. Jay Stagg has a strong culinary background and then experiments with different cuts, flavors, and recipes. Schools typically use fewer spices than restaurants to please a variety of palates and focus on varying cooking methods, from grilling to baking or slow roasting.

The school foodservice has developed one recipe that they call Montana Chili, which includes local beef and local produce. The chili includes local beef, red lentils from Montana, and pureed squash from the schoolyard. Another way that Whitefish uses more produce with beef is by adding mushrooms to sloppy joes and hamburgers. All of these strategies extend the existing servings of local beef and broaden the nutritional profile of the meal. Flexibility and a willingness to experiment have been critical to working with local beef on a budget.

The majority of local beef delivered to the kitchen is ground, often from culled cattle, or cattle that are older, and past their production age and weight. Meat from culled cattle is typically processed into ground burger. The foodservice focuses on local beef and not on whether it is grain-finished or grass-fed because the difference in flavor is barely noticeable once the product is turned into something like chili.

Beef to School Costs

Whitefish School foodservice finds that purchasing an entire cow is usually more cost effective than buying specific beef products. The foodservice does not negotiate beef prices because he wants to support the processor’s business. The local beef typically costs \$3.00 to \$3.50 per pound, or 43 cents per two-ounce portion of beef. Local beef is a large portion of the meal cost since a lunch tray costs the school foodservice a maximum of \$1.20.

Occasionally, the school foodservice has purchased a steer and sold other cuts like New York Strip steaks to staff at the school to offset the price of local beef cuts served in the cafeteria. This was a convenient and popular method for balancing the budget.

The school foodservice is designed to be self-supporting. Serving local beef requires balancing the protein with other USDA Foods on the tray. Worrying about daily costs can be a pitfall for spending money locally because “ultimately the budget or your revenue and your expenditures stretch out for the entire year.” For example, on days where mostly commodity foods are served, food costs may equal \$10 for 600 meals. Then in the same week burger day will cost substantially more. It is also important to charge enough for all foods served including a la carte, while monitoring food waste.

School food has a different budget model than the restaurant industry, where the foodservice director trained, “In a restaurant you start with your food costs and then build your final price. In a school you start with the final price and you work backwards. What you have leftover after you take away labor is basically what you’re allowed to spend on food. And that’s that, and if you spend more than that, then your program ceases maybe ceases to exist.”

“

Start small... I wouldn’t jump in thinking that you’re going to replace every single one of your beef products on your menu, like this month. Start with doing your marinara, ya know, and figure that out. And if it works okay, then go to taco meat. Just kind of evolve into it. I’ve had a few things where I’ve jumped too far into them and it ended up being more work and hassle and more expensive than I thought in the long run. So start small, and I mean even if you’re a really small school... just find someone who has 10 pounds of ground... Start there. Try one thing.

”



I think if it was to be any bigger and I had to bring in extra people, then I would look at someone else processing and paying that added value versus having more labor... I'm able to squeeze processing into everyone's normal workday and not add any labor. So, half an hour of grinding here, and an hour of extra baking here, or on a slow day planning ahead and grinding... hundreds of pounds of something.

Sustaining a Beef to School Program

Whitefish School District considers a few factors key to sustaining local beef in the school cafeteria:

- Proper equipment for preparing local beef is essential. The school was awarded grant money from Montana No Kid Hungry to purchase grills for the Summer Meals Program. The grills have been beneficial year around. The kitchen has not made many other adaptations for cooking or processing local beef. The school has large freezers and recognizes that space could be an issue for schools with smaller freezers.
- All foodservice employees have ServSafe training. No other training was needed for handling raw beef products.
- The ability to process local beef products versus paying for value added products benefits the school's budget, but requires that the school meal program is small enough for the kitchen to maintain adequate production.

The Future of Beef to School

Whitefish School's beef to school program is sustainable based on availability of local production and processing resources, community participation, and attention to the budget. The willingness of local producers and a local processor to work with the school district creates a very strong beef to school program. A step-wise growth of a beef to school program is recommended, and in this case has led to success. Jay Stagg provides advice about developing a beef to school program, "Don't jump in with... making burger patties, and cooking burger patties, and holding them, [that's] probably one of the hardest processing things to do with ground beef versus making taco meat, where

you're not going to change your recipe or your processing at all versus commodity beef... Start small... I wouldn't jump in thinking that you're going to replace every single one of your beef products on your menu, like this month. Start with doing your marinara... and figure that out. And if it works okay, then go to taco meat. Just kind of evolve into it." Moving too fast can lead to "more work and hassle and [be] more expensive... in the long run. So start small... Try one thing."

Beef and Mushroom Burgers

Serving Size: 1 burger Yield: 29

Montana Grass Fed Beef	5 lbs	
Worcestershire Sauce		¼ cup
Dehydrated Onion Flakes		1 cup
Garlic Powder		¼ cup
Black Pepper, Ground		1/8 cup
Salt		2 tsp
USDA IQF Mushrooms, Diced, Frozen, Material #110421	1lb + 13oz	
Swiss Cheese Slice	29 x 1oz slices	



Oven Temperature & Baking Time: 350°F, 14 min

1. Two Days Prior to Day of Service:
Pull ground beef from freezer and place on sheet pans. Label and date ground beef. Place on bottom shelf in cooler to thaw.

2. Day of Service:
Pre Prep: Clean and sanitize workstation.
Prep: pull minced onions, black pepper, salt, garlic powder and Worcestershire sauce and place at workstation.
Pull Montana Grass Fed Beef from cooler and place at workstation.
Pull USDA IQF Mushrooms from Freezer and place at workstation.
Wash hands thoroughly and put on gloves.
Add minced onions, black pepper, salt, garlic powder and Worcestershire sauce to meat.
Mix in seasonings.
Add frozen mushrooms and fold into seasoned meat.
Form into a ball.
Wash hands thoroughly.

3. Prep: Pull sheet pans and #10 disher and set up production line.
Wash hands thoroughly and put on gloves.
Using #10 disher, place 1 scoop of mushroom burger on sheet pans, 5 x 6.
Using your palm, flatten burger and place a thumbprint indentation in the center. Wash hands thoroughly.

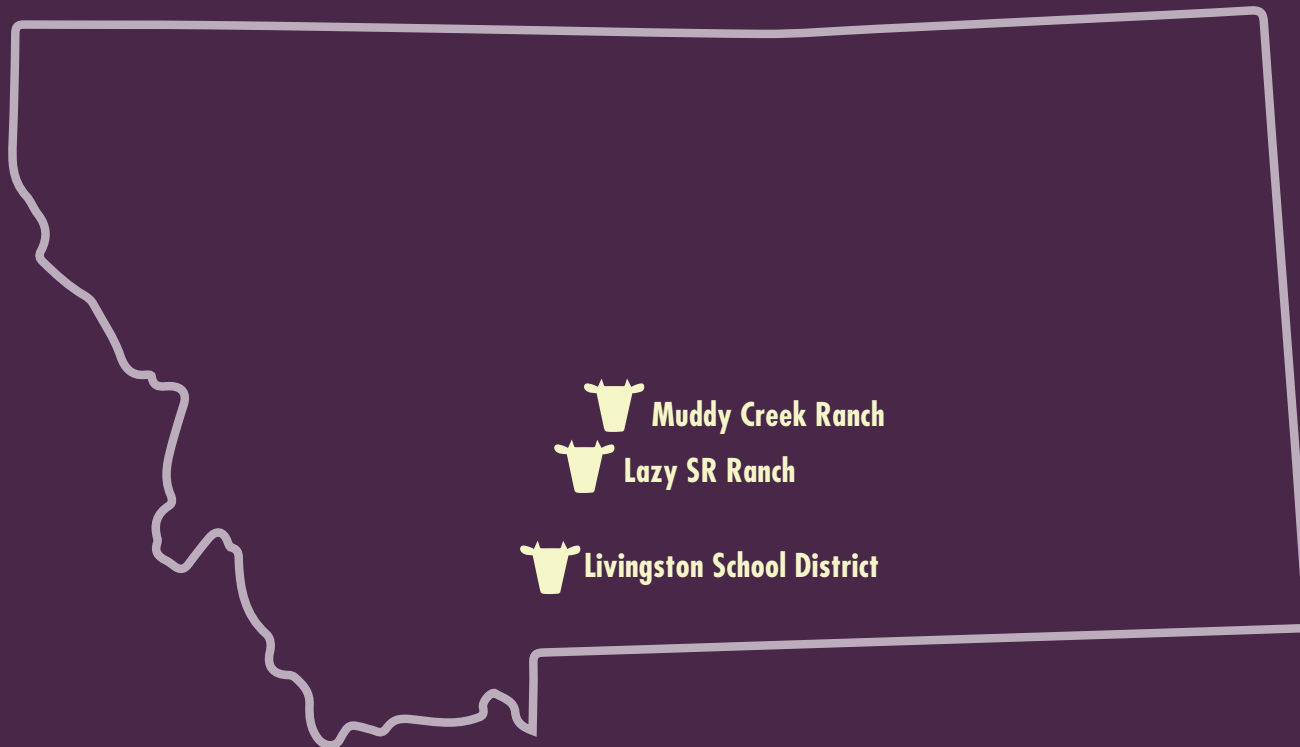
4. Cook: Bake at 350°F in a pre heated convection oven for 14 minutes or until an internal temperature of 165°F is reached. Add one swiss cheese slice to each burger.
CCP: Heat until an internal temperature is reached of 165°F for 15 seconds
CCP: Batch cook as necessary to insure best end product and nutritional.

5. Hold: Place in warmer and hold 135°F.

6. Serve: 1 Montana Beef and Mushroom Burger Slider



Lazy SR Ranch
Muddy Creek Ranch
Livingston School District



BEEF TO SCHOOL AT LAZY SR RANCH



Cattle Inventory

Park County: 2015 Cattle Inventory: **42,000**
Gallatin County: 2015 Cattle Inventory: **47,500**
Sweet Grass County: 2015 Cattle Inventory: **36,000**

2014 Human Population

Park: **15,642**
Gallatin: **93,108**
Sweet Grass: **3,622**



Processor Inspection Status

Works with Ranchland Packing (Federally Inspected Facility)

Who is Lazy SR Ranch?

Lazy SR Ranch is located in the picturesque Shields River Valley about 30 miles north of Livingston, Montana. Dirk and Miki Adams own and operate the ranch with the help of employees. Lazy SR Ranch has been in operation for over 30 years. The first 20 plus years of the ranch was a traditional cow-calf operation. Nine-hundred mother cows produced high quality Black Angus calves to be sold to the cattle market in the fall of each year. After requests for local beef increased about five years ago, Lazy SR started holding some calves each fall for direct marketing. The held cattle are owned by Lazy SR until they are ready to be slaughtered and processed for retail sales. Today, about 80% of the calves are sold each fall to feedlots for finishing or to other ranchers as replacement heifers.

Business Model

Lazy SR Ranch offers customers beef products and other meats. They raise heritage chickens, heritage turkeys, Berkshire pigs, and Leicester lambs, in addition to the cattle. The animals are not given hormones or sub-therapeutic antibiotics. The beef, lamb, and pigs are processed by outside processors. The turkey and chickens are raised in a pasture and processed in a processing facility owned and operated by Lazy SR.

Currently, Lazy SR Ranch supplies to businesses in Yellowstone, Gallatin, and Park Counties of Montana and utilizes Summit Distribution

based out of Bozeman to assist with sales and delivery. Lazy SR markets the finished beef products through four different marketing channels, custom cutting, grocery stores, businesses, and institutions.

Customers can place an order for a whole, half or quarter beef for custom cutting. In custom cutting arrangements, the client provides instructions about how the meat is to be cut and packaged. Lazy SR then has an animal processed by Ranchland Packing in Butte to meet the customer's needs. Customers can also stop at the grocery store in Wilsall and purchase individual cuts of meat. The grocery store is owned by Lazy SR and is managed by Dirk's daughter. The store offers a variety of grocery items including a nice selection of beef products from Lazy SR. These marketing options primarily serve their individual customers.

Another marketing option focuses on businesses and institutional customers. Customers include schools, grocery stores, restaurants, and hospitals. Businesses and institutions can contact Lazy SR to place an order for the week or for a season. Some clients place orders for a single cut of beef, such as 20 rib-eye steaks, while others will order a variety of different cuts. Clients may also order ahead for an entire season and deliveries of that order will be made as scheduled. Larger orders can then be set aside to be delivered when the customer needs it, allowing businesses to have a consistent price for that cut of meat for an extended period of time. Local businesses and institutions include the Community Food Co-op and Sola Market in Bozeman, Good Earth Market in Billings, Livingston Health Centre in Livingston, and Livingston School District. Through Summit Distribution, the beef supplied by Lazy SR has also been sold to Montana State University.

Production and Processing

Lazy SR keeps the cattle raised for retail sales on the ranch until they reach 6 months of age and about 850 pounds. The cattle are sent to Hobson, Montana to feed on Montana grains until they reach approx-



imately 1,350 pounds. Lazy SR is proud that the animals are Montana grass fed and Montana grain finished. Because of this product, they report that the end product is high in quality for the consumer. Once the animals reach market weight, they are processed by a local meat processing facility. Currently, Ranchland Packing in Butte processes the cattle. Ranchland Packing's inspection status allows Lazy SR's meat to be sold in Montana and other states. Most processing facilities in Montana are state inspected which does not allow for the finished products to be marketed in other states. Lazy SR retains the ownership of these animals from birth all the way through processing. In 2015, Lazy SR brought 175 animals to slaughter. In the future, Lazy SR Ranch would like to investigate spacing the slaughter at quarterly intervals to assist with quality control.

Beef to School Program

History

Schools have important client for Lazy SR for the past few years, most notably supplying Livingston School District with their beef

“It surprised us because we figured here in Montana there would be lots of access to local beef and we learned that actually, that most of it gets shipped out.”

“We’re very big believers in our local food system. I think that for kids to learn where their food comes from and how its processed is really, really important.”

products. Co-owner Miki Adams believes that supporting a local school is worthwhile as students should know and learn about where their food comes. Lazy SR invites students and school groups to their ranch and learn about meat production. For example, students are able to walk through the entire farm to table process in the poultry plant that is owned and operated by the ranch.

School Partnerships

Lazy SR Ranch primarily worked with Livingston School District during the 2015 through 2016 school year. The district primary orders hamburger for school lunch. Occasionally, Livingston purchases other products, such as roasts. Livingston’s first local beef supplier could not provide the supply of beef required for the district. At that point, Lazy SR built their relationship with Livingston and the ranch has enough beef available to supply the school’s needs. Lazy SR’S business model allows the ranch to reduce their calf sales and finish more cattle to increase their beef supply as demand increases.

Why Build a Beef to School Program?

Dirk and Miki believe that the local food system is important to support. As such, Lazy SR demonstrates their support of the local food system by providing local beef and education to Livingston School District. Local beef in the lunchroom provides students with the opportunity to learn where their food comes from, how it is processed, and how sustainability is a necessary component of the food system. The students appreciate the local beef as well notes Miki. She enjoys having the kids come up to her and say how much they love their burgers – they had them for lunch that day.

Miki also believes that supporting a Beef to School program has benefits for the community. Although Lazy SR is currently the ranch that supplies Livingston School District with their beef, other ranches in the area are proud that the beef being served to the children in the community is coming from the Shields Valley.

How to Connect with Schools

Developing a relationship with the school, and especially the food-service director, is one key piece to making beef to school work.

The foodservice director in Livingston made the initial contact with Lazy SR Ranch when one of the other beef suppliers in the area was unable to meet the demand of the school district.

Having a relationship with a bigger school or school district is helpful in planning plan how much beef the ranch needs to produce. Putting a contract in place also assists with forecasting production needs over a given time period, particularly when dealing with the school calendar.

Establishing a relationship with a processor who provides the producer with quality cuts and packaging is extremely important to the ranch. Lazy SR Ranch has worked with a number of processors in the past and currently collaborates with Ranchland Packing in Butte.

Meat distribution is another aspect of the beef to school process to consider. Lazy SR utilizes the services of Summit Distribution in Bozeman to assist with the delivery of their beef to the school district in Livingston. Summit Distribution is able to deliver the meat in the refrigerated truck to the schools ensuring that food safety standards are met.

“This is something we’ve evolved in and learned as we go. It’s not like there’s this model that was out there somewhere that we could go research and follow.”

Beef to School Costs

Lazy SR Ranch sells their beef at prices that fluctuate, determined partly by supply and demand of the market and partly by what the school is able to afford. The price of a particular cut of beef is based upon factors such as the costs of purchasing, feeding, and processing cattle.

Beef to School Program Needs

There are several factors that Lazy SR Ranch has considered for maintaining a beef to school program. Adequate space and storage is required to meet the needs of the school. For this reason, Lazy SR works with Summit Distribution to assist with freezer space for the ranch. The processor that works with the producer and school should have adequate equipment to meet the needs of the school. For example, a processor that owns a hamburger patty maker can

18	19	20
Chicken Strips Mashed Potatoes/ Gravy Carrots Fruit	Chicken Alfredo Salad/Dressing Fresh Vegetable Fruit	Tomato Soup and Pastrami Sandwich Broccoli Fruit
25	26	27
Chicken Teriyaki Fried Rice Broccoli Normandy Fruit	Ham and Scalloped Potatoes Roll Salad/Dressing Fruit	Lazy SR Burger French Fries Corn Fruit

make and supply the school district with pre-formed hamburgers. Smaller processors may not have the resources or equipment to meet the needs of a school district. It can also be difficult to find processors who are sufficiently trained and have the skills required to process beef adequately. Meeting food safety guidelines for the producer, processor, and school is a big consideration. The ranch relies on Ranchland and Summit Distribution to help deliver nutritious and safe beef to schools. In the future, Dirk and Miki may apply for grants to a buy refrigerated truck so that the ranch can make meat deliveries in-house.

Lazy SR Ranch does not currently market their beef product and relationship with Livingston School District extensively. In the future, would like to educate other school districts on the benefits of consuming local beef supplied by the ranch.

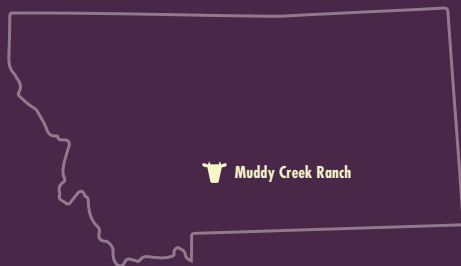
Sustaining a Beef to School Program

Supporting a Beef to School program can have its challenges. One of the biggest challenges for Lazy SR is not having some type of model or directions to follow. Lazy SR has learned how to build a beef to school program “on the go” and in collaboration with Livingston School District. Lazy SR learned how to ensure a quality beef product after it returned from the processor as a packaged product and needed to be stored until delivery.

The Future of Beef to School for Lazy SR

Lazy SR Ranch sees education as the key to growing beef to school programming in the future. They believe that processors and producers can contribute together to increase beef to school. Lazy SR Ranch notes, “We would love to sell beef to more schools.”

BEEF TO SCHOOL AT MUDDY CREEK RANCH



Cattle Inventory

Park County: 2015 Cattle Inventory: **42,000**
Gallatin County: 2015 Cattle Inventory: **47,500**
Sweet Grass County: 2015 Cattle Inventory: **36,000**

2014 Human Population

Park: **15,642**
Gallatin: **93,108**
Sweet Grass: **3,622**



Processor Inspection Status

Works with Stillwater Processing (Federally Inspected Facility)

Who is Muddy Creek Ranch?

Muddy Creek Ranch is a grass fed cattle operation located near Wilsall, Montana. The ranch primarily serves customers in Gallatin and Park counties. Muddy Creek is owned and operated by second generation owners Karen and David Shockey.

Business Model

Muddy Creek Ranch operates as a vertically integrated beef system. They raise and produce seed stock, produce semen and embryos for shipment across the country, maintain a commercial cow operation, and also operate a grass finishing beef business that feeds the meat production and seed stock aspects of the business.

Muddy Creek Ranch is not the typical cattle operation. One thing that sets the ranch apart is the Lowline Angus breed of cattle that they raise. Lowline Angus are a line of Aberdeen Angus cattle that trace their roots to Australia in the 1920s. Lowline Angus, became a recognized breed in the early '90s and are 200 to 400 pounds smaller than a traditional Angus. David Shockey believes these smaller animals are more efficient. The operation currently has about 250 mother cows, 50 bulls, and 100 replacement heifers.

Muddy Creek's local market for their beef product includes Livingston, Bozeman, Helena, and occasionally Big Sky and Billings in Montana. Customers range from individuals, to restaurants, to institutions.

In 2013, Karen and David purchased The Wilsall Bar and Cafe from Karen's parents. The restaurant is one the few places to eat in Wilsall and serves as a gathering place for the community. The restaurant recently moved into a historic bank that had been operating as a bar. After a major remodel to the facility, they reopened as the Bank Bar and Vault Restaurant. The beef served at the restaurant is 100% grassfed beef from Muddy Creek Ranch.

In addition to their family-run restaurant, Muddy Creek also supplies to five other restaurants, although they do not provide the beef for their entire menu. Instead, various restaurants – such as Open Range in Bozeman – feature one specialty item on their menu and advertise it as a "Muddy Creek Ranch grassfed special."

Individuals can also order beef directly from Muddy Creek's website. They can order specific cuts of beef or a quarter, half, or whole cow. The beef can be shipped to the customer or they can arrange to pick it up. Most of the business customers place their orders by phone. Many of these customers purchase only specific cuts of beef in various sizes. The ranches furthest client is in North Dakota, purchasing four to five ice chests at a time when they are visiting in Montana.

Muddy Creek Ranch has sold their beef to schools in the past and enjoyed the value in supporting the beef to school partnerships. With an increase in business opportunities in restaurants and direct ordering, the ranch does not supply to schools currently.

Production and Processing

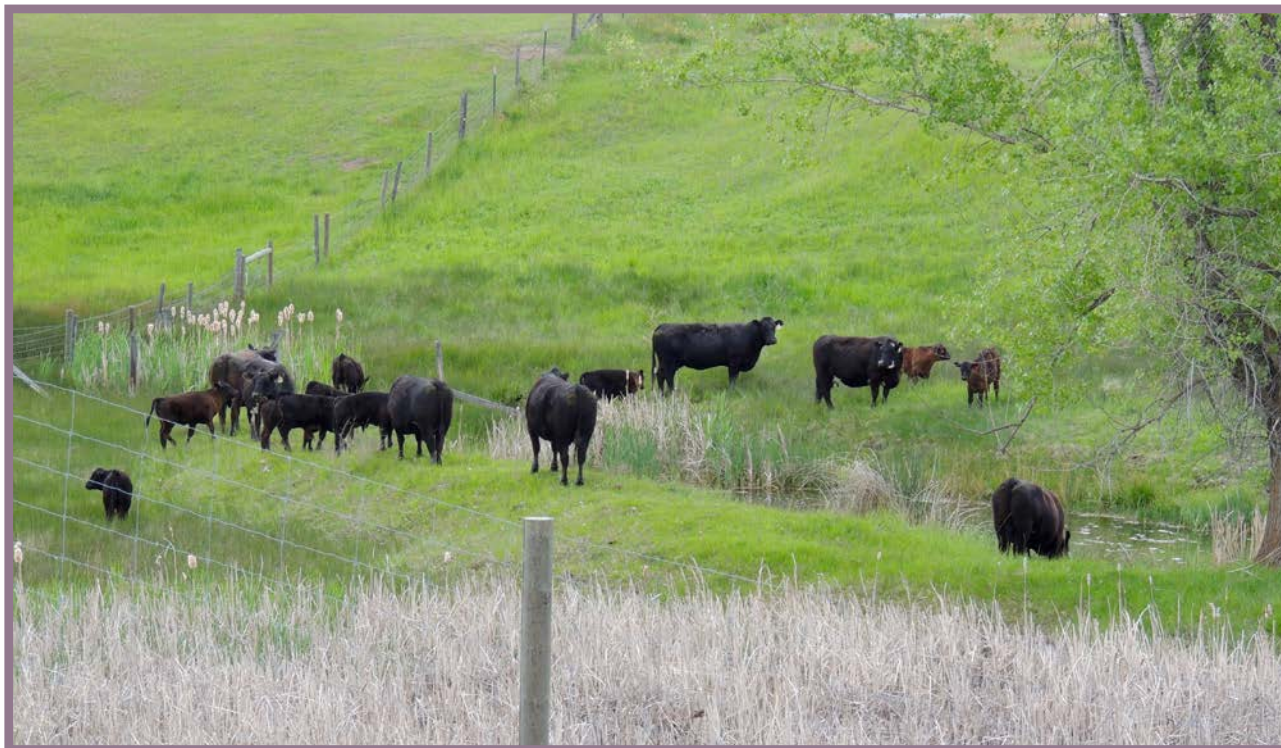
Another unique aspect of Muddy Creek's operation is that the cattle are grassfed and finished. The industry standard for raising cattle in Montana is to raise the cattle from 0 to 9 months on grass pasture and then the animal is sent to a feedlot to be finished on a grain based feed ration. Muddy Creek's animals are pastured until they reach an age of 18 to 20 months when they are ready for processing. The operation also avoids using hormones or antibiotics with their cattle and specifically labels their products to reflect these practices.

Muddy Creek's cattle are also raised to produce beef that is sold through several retail markets. Currently, the ranches cattle produces 20,000 to 30,000 pounds of burger in sales a year. Because of the grassfed process for finishing and the length of Montana winters, all of the cattle destined for retail beef sales are processed in the late fall of each year during October through December.

Typically, between 60 and 90 head of grass feed steers are processed each fall for the beef production. The slaughter dates vary, depending on the calving times. Stillwater Processing processes the cattle on a custom basis. Stillwater is a federally inspected USDA facility that Muddy Creek rents out for the day to bring in 30 head of cattle. The federal inspection allows the finished products to be marketed to clients both in Montana and in other states. Muddy Creek also possesses two licenses – storage depot and retail. All of Muddy Creek's beef is traceable to the batch date in case there is an issue in quality.

“Customers are buying a known product. That's what they like. They like to know where it comes from.”





Muddy Creek supplies a variety of beef cuts, but when it comes to selling to schools, they mostly supply burger and chuck roast for hamburgers and stews.

Beef to School Program

History

Muddy Creek Ranch sold and donated beef to local schools in Livingston and Shields Valley in the past before other components of the ranches business grew to beef supply capacity. Karen and David like the educational value of having their meats in the schools as well as the local aspect of having the product supplied locally.

Why Build a Beef to School Program

Muddy Creek Ranch has sold beef to several schools. Many of their customers, including schools, believe that antibiotic-free beef is best, as their beef is raised no hormones, and no antibiotics. It is also easy for the ranch to answer the common question, "Is it local?" Consumers appreciate that the cattle never leave the ranch. During Muddy Creek's field days, customers can visit the ranch and see the cattle grazing in the fields and ask the owners questions.

How to Connect with Schools

Muddy Creek initially became involved in the beef to school market due to a grant that allowed a partner school to purchase local beef outside of their usual budget. The school sought grassfed beef, but could only afford it at a discounted price. Muddy Creek agreed to donate 200 to 300 pounds of beef for one meal, visited the school, and explained to the students the origin of the beef. To further market Muddy Creek's sourcing to schools, Karen and David contacted the newspaper for an article on the benefits of grassfed beef and their relationship with the schools, and paid for an advertisement as well.

"We gave the school 200 to 300 pounds of beef just to eat in their school lunch one day and we also talked to the kids about how we raised the cattle."

Schools began purchasing the ranches beef in 5- to 10-pound vacuum sealed packages, receiving 200 to 300 pounds of beef at a time.

"All of our beef is graded, which we don't have to do. We grade the beef to ensure quality."

Schools had the capacity to store the beef in their freezer until ready for use. Most of the beef was ground beef but some was chuck roast.

Working with Stillwater Processing helped the beef to school relationship work. The facility processed with consistent quality, graded the products, and used no chemicals.

Beef to School Costs

Muddy Creek has worked with schools to provide beef at a discount and donate products. Price is the main barrier in selling beef to schools. The ranch decreased sales to school because it was difficult to break even on their sales and business costs with schools. Additionally, they received increased demands from other customers for the ground beef. Muddy Creek started selling their ground beef to schools at \$2.50 per pound and eventually had to increase the price outside of the school's budget in order to have a sustainable business model. For reference, typically Muddy Creek sells their ground beef to restaurants for \$4.00 per pound.

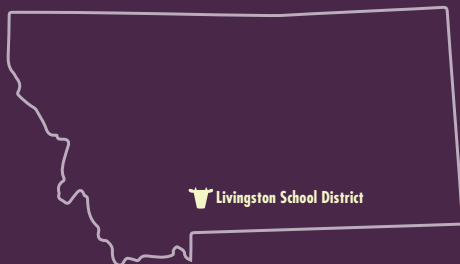
Sustaining a Beef to School Program

One of the biggest challenges in sourcing to schools is the issue of profitability. The school lunch market exists, but Muddy Creek is unable to supply the beef to the budget constraints of the school and the limited quantity of cattle in comparison to the quantity demanded by schools.

The Future of Beef to School for Muddy Creek Ranch

Muddy Creek Ranch entered the beef to school market through a school-based grant. This funding opened the door for selling to the school, but unfortunately sales concluded with the end of the grant. With further grant or school lunch funding opportunities, it's possible that Muddy Creek could resume selling their product to schools.

BEEF TO SCHOOL AT LIVINGSTON SCHOOL DISTRICT



Schools Involved

Winans Elementary School, 374
East Side Elementary School, 294
Pine Creek Elementary School, 30
Sleeping Giant Middle School, 327
Park High School, 500

Number of School Lunches Served Per School Day
Approximately 700 to 800

School foods prepared in
Central kitchen

Foodservice Staff in Case Study
Foodservice Director – John Polacik
School Lunch Participation Rate
Park County (2014) – 49.67%

Local Beef Dishes Served

Chili	Roasts
Hamburgers	Shredded beef
Lasagna	Soups
Meatloaf	Spaghetti sauce
Pasties	Tacos

School Demographics

Livingston School District is located in Livingston, Park County, Montana. The district consists of five schools, including B.A. Winans Elementary School, Eastside Elementary School, Pine Creek Elementary School, Sleeping Giant Middle School, and Park High School. In 2015-2016 enrollment ranged from 30 to 500 students. During the same school year, Livingston School District served all schools from a central kitchen located at Park High School to 1450 students and between 700 and 800 meals per day. In 2014, 50% of students participated in the school lunch programs across Park County.

“ I have access to that beef. I’d buy that beef for myself. And, it’s better beef. Seriously it’s that simple. Bottom line. It’s better quality. I know where it comes from. I know the people that own the ranch. I’ve been on that ranch. I’ve seen how great their operation is. There’s nothing sketchy about it. You know where it’s coming from. And it tastes better than any other beef in my opinion. ”

Livingston School District was directed by John Polacik from Spring 2012 to Fall 2015 and Michele Carter from Spring 2016 to present. John Polacik and Michele Carter both built their foodservice skills by working in the foodservice industry. The school district has an emphasis on farm to school programming with support to build capacity from a two-year USDA Farm to School grant received in 2013. Through the grant, a Farmer Educator, FFA Advisor, and Agriculture Teacher collaborated to provide students with gardening and animal husbandry education. Additionally, the grant provided kitchen equipment for expanded food processing capabilities.

Beef to School Program

History

Livingston School District began purchasing local beef in 2012, when John Polacik became foodservice director. The foodservice first purchased local beef sporadically for special events and celebrations only and used USDA commodity beef for regular meals. After receiving competitive prices and using all of the USDA commodity beef in storage, Livingston School District began to source 90% local beef from a ranch in southwestern Montana in 2013.

What is Local Beef?

Livingston School District defined local food purchases when they wrote and were awarded a USDA Farm to School grant. The foodservice prioritizes purchasing food as closely as possible by first turning to the Livingston community, then Park County, bordering counties, Montana, and bordering states. Livingston School District has worked with Muddy Creek Ranch and Lazy SR Ranch to source local beef which are both in Park County, Montana.

Why Local Beef is Used in the Foodservice

The foodservice and surrounding community are very supportive of the local beef program for several reasons. First and foremost, local beef is very accessible to Livingston’s foodservice as there are several ranches in the area. Having the ability to know and directly connect with the rancher to ask about the product is one advantage to using local beef. The foodservice believes that the local beef is higher in quality because it looks fresh with a pink color and appealing fat content, the cooking process is cleaner, and it has a superior taste and smell.

Students and many parents are aware of the emphasis on local beef and are beginning to understand its importance through marketing and education done through the foodservice and USDA farm to school grant. Generally, students are vocal with the foodservice about what they do and do not like about recipes and the foodser-

vice responds accordingly. In the past, students have noticed and commented on a noticeable difference in the beef when non-local beef products were used due to an ordering shortage. Staff, teachers, and other adults also support the beef to school program by purchasing and consuming school lunch.

Connecting with Processors and Producers

Livingston School District has worked directly with ranchers to source local beef, namely Lazy SR Ranch and Muddy Creek Ranch. The ranches work directly with state inspected processors to provide the types of beef products needed for schools. In the beginning, Muddy Creek Ranch contacted the foodservice to begin the beef to school program and offered competitive prices. After building a relationship through other programs, Lazy SR Ranch evolved as an additional beef to school partner at the same time that Muddy Creek Ranch was unable to meet the quantity needed for the foodservice.

The foodservice places beef orders for frozen beef by telephone or text message with the ranches each month. The order is based upon what is needed for recipes in the upcoming weeks and how much local beef is still in the freezer. The school sometimes receives a confirmation if needed or the beef is delivered without other com-



“Within the state is probably a good focus to have [for purchasing local foods]. A Montana thing. Montana pride.”

munication. Beef is delivered directly by the ranches or a delivery service at an agreed upon time of day. Space for storing beef at the school is a limiting factor. If additional storage space was available, the foodservice would order the beef less frequently to make the ordering and delivery process easier on all parties.

Gaining Support for Beef to School Program

Local beef is marketed through word of mouth, menu descriptions, and food preparation at Livingston School District. Word of mouth before and during school lunch service is the best marketing tool for local beef. Having the school foodservice staff talk about the local beef in the meal of the day and the ranch where it came from is a simple and effective marketing tool for beef to school. Additionally, writing the ranch name on the menu helps to sell the product. The foodservice also makes 1,000 burger patties an hour using a burger patty machine in a place where the students can walk by and see lunch being made, which provides a visual cue and excitement for the meal that day.

Outside of school lunch, students are educated about farm to school in the classroom from the district's Farmer Educator and Agriculture Education teacher. Students learn topics such as supporting the local economy by buying foods from community ranches that employ people students know and about animal husbandry through Agriculture Education classes.

Type of Beef Used in the Foodservice

Livingston's foodservice receive all beef frozen and staff use different cuts of local beef, including ground, ribs, roasts, and flank or skirt steak. Commonly served recipes that use local beef as an ingredient are spaghetti sauce, lasagna, tacos, hamburgers, pasties, and meat-loaf. On occasion, chuck roasts, pot roasts, or shredded beef are served. The local beef is thawed and prepared when the foodservice staff has time to pull the beef, thaw the beef, open the packaging, and then prepare the recipe.

When hamburgers are served, the foodservice staff uses the patty maker machine the day before or the day of service. The patty maker machine has made preparing burgers fun and easy. Previous to owning the patty maker machine, the foodservice staff formed the burger patties using a hand hamburger press. This process was very laborious as it took two days to make 1,000 burgers. The foodservice has considered processing fresh ground burger into patties on one day and freezing for upcoming meals.

For other recipes, raw beef is cooked in two different ways depending on menu planning for the week. In one method, the beef product is cooked and fat drained before the day of service in a tilt skillet, put in the freezer until the day of service, and then incorporated into the recipe of the day of service. In another method, the thawed beef is placed into a large 50-gallon pot on the day of service, cooked down with water added, drained, and then added to the recipe. The second method saves time because the dishes only have to be cleaned once.

Livingston School District uses commodity beef seldom and purchases the ground beef or prepared products such as meatballs. The foodservice sees the advantage of commodity beef as being pre-cooked and crumbled or prepared to easily add to a recipe.

Beef to School Costs

The cost of the product is the most important factor when considering how much and where to purchase local beef. Local beef is paid completely through the foodservice budget. Livingston School District is offered competitive prices from local ranches that compare to similar fat content and quality of beef on the non local beef market. The beef patty machine was purchased through a farm to school grant to increase the likelihood of using local beef because of long term reduced costs of the ground product. At the time of the interview, the school district supported the foodservice financially if it did not break even which allowed for more flexibility in local food purchases.

Sustaining a Beef to School Program

Livingston School District considers a several factors key to sustaining local beef in the school cafeteria:

- Working with a ranch that will provide a competitive price to the school foodservice.
- Finding a consistent supply.
- Ordering enough product.
- Coordinating a delivery schedule that works with the foodservice needs.
- Receiving packages of beef that are convenient size, such as five pounds.
- Preparing raw beef has required a foodservice staff that is willing and has the cooking skills to work with the product.
- The program purchased the patty machine which has significantly reduced the time and cost to serve local hamburgers.
- Food safety has always been an important factor in serving and sourcing local beef because the ranch and processing facility is within the community. The foodservice uses the same process for ensuring the local beef is safe to eat by following standard thawing, cooling, storage, and cooking procedures.

The Future of Beef to School

Into the future, Livingston School District has ideas for how to grow their own and other beef to programs. Without a patty machine, purchasing prepared products directly from the processor significantly decreases required staff time. A long term vision is to involve students in raising and processing beef. John Polacik provides the following advice to starting a beef to school program, "Start small and don't even do a whole meal. Buy a little bit of something and cook it and see what it's like. Do a sample. Do a test run. Let's try this, and if it works, great go for it."

Taco Meat

Serving Size: 2oz to 3oz Yield: 800

Montana ground beef, raw	120 lbs	
Water	3 gallons	
Beef base		1 ½ cups
Taco seasoning *see recipe below		6 cups
Tomato paste	#10 can	1 can

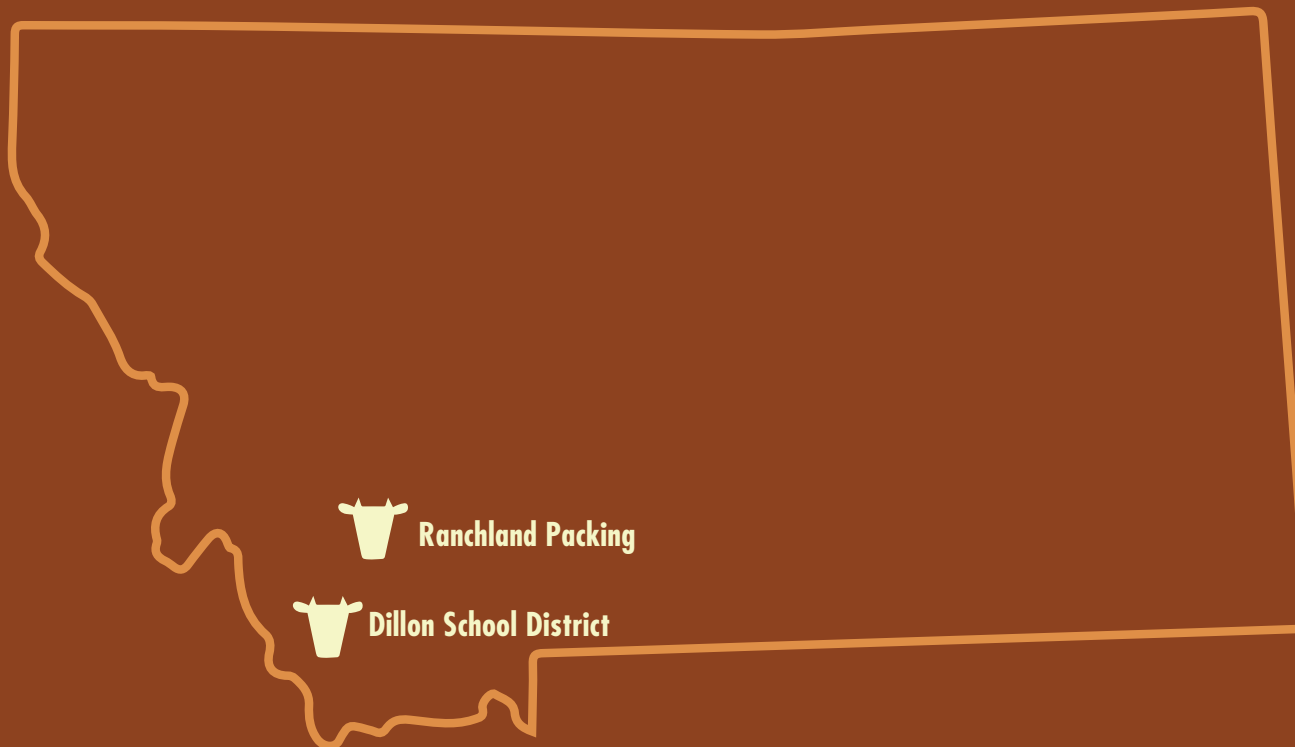
Taco Seasoning

Chili powder	4 cups
Cumin, ground	4 cups
Paprika, ground	2 cups
Garlic powder	2 cups
Onion powder	2 cups

1. Combine all ingredients for taco seasoning mix.
2. Brown beef directly in braiser.
3. While beef is cooking mix water, tomato paste, beef base and seasoning in large kettle. Bring to a boil and simmer while beef is cooking.
4. When beef is browned, remove with strainer to get rid of fat and place in cake pans to be chopped fine.
5. Once beef is chopped, add to kettle and mix well. Let cook for ½ an hour and add ½ cup of salt at a time to taste.



Ranchland Packing Dillon School District



BEEF TO SCHOOL AT RANCLAND



2015 Cattle Inventory

Butte-Silver Bow County: **less than 5,000**

Deer Lodge County: **5,000**

Jefferson: **26,000**

Beaverhead: **145,000**

Madison: **71,000**

2014 Human Population

Butte-Silver Bow: **34,000**

Processor Inspection Status

Federally-Inspected Facility



Who is Ranchland Processing?

Ranchland Packing is a federally inspected meat packing facility located near the intersection of Interstates 15 and 90 in Butte, Montana. Though this processor has a multi-decade history, Justin and Ashley Fisher have been the owners since 2014. Built upon on a mining heritage and located in a mountainous region, Butte-Silver Bow County has the third smallest beef herd in Montana and is the smallest Montana county in land area. Adjacent counties however, host some of Montana's largest cattle inventories, making Ranchland Packing's location ideal.

“We are focused on the better quality meat. Instead of doing the bulk cheaper stuff, we would rather do the niche better quality stuff.”

Business Model

Ranchland Packing is a full service processor operating out of a 15,000 square foot facility offering slaughter, fabrication (breaking the carcass or primals into cuts), and further processing. For Montana, Ranchland Packing is a larger processor; their USDA federal inspection status allows for both intrastate and interstate commerce. Ranchland Packing serves a range of clients that include restaurants, grocers, institutions, and community members in the greater Montana, Wyoming, and Idaho region. A significant portion of their business is in the supply of premium products to the higher end and specialty restaurants associated with tourism in mountain resorts and Glacier, Yellowstone, and Grand Teton National Parks.

Production and Processing

Ranchland Packing processes large and small animals and its primary business is cattle, sheep, and hogs. The summer is the processor's busy season, tracking with regional tourism. During summer in Montana, herds of cattle are often out on range resulting in fewer culling and management opportunities. Ranchland Packing's proprietors mention that this seasonality creates some scarcity of extra cattle during their busiest time of the year.

On average, Ranchland Packing processes 50 hogs, 50 beef cattle, and 10 sheep per week into a wide range of cuts and meat products. The processing plant is at about 60% capacity over time, including busy summer and fall seasons. While they do not sell any products under the Ranchland Packing name, the company sources animals from select producers for house-label brands such as *Montana Ranch Beef* and *Montana Natural Pork*. They currently deliver to Missoula twice a week, Helena once a week, Bozeman three to four times a week, and Dillon, Ennis, and Virginia City once a week.

Beef to School Program

History

Ranchland Packing has worked with schools for about four and half years. Via their direct work with Dillon School District and sometimes Butte School District, as well as indirectly through schools that Lazy SR Ranch provides beef for, their radius of K-12 school clients is approximately 110 miles. Ranchland Packing defines local meat as a Montana raised and processed product.

School Partnerships

Ranchland Packing has worked with multiple schools in recent history, including locally in Butte. Their primary partnership for K-12 institutions is the Dillon School District, 64 miles to the south. In this

partnership, they are a third-party supply chain partner. Dillon School District sources animals through donations from community members, 4-H, and ranchers. Then, Ranchland Packing processes the donated cattle. As the current processor for Lazy SR Ranch, Ranchland Packing is indirectly related to that ranch's beef-to-school program, which works primarily with the Livingston School District. The processor also processes meats for universities in Montana.

Why Build a Beef to School Program

Ranchland Packing sees value in the qualitative aspects resulting from beef to school relationships. Their beef to school programs support local communities and economies. The beef that they provide is high in quality and the origin of the cattle is traceable. Generally, Ranchland Packing does not report any internal challenges working with schools and believes that farm to school programs, including beef, contribute to the success of producers, processors, and schools.

How to Connect with Schools

The meat processing industry experiences seasonal demand, particularly in late summer through early winter. Schools that can plan ahead and establish a processing contract in summer, before a school year begins, can help the processor to better distribute work load.

Ranchland Packing's processing schedule with Dillon School District depends on when a community member donates a live animal to the school. Ranchland Packing is given a limited timeframe in which to meet the school's order. The processor is committed to beef to school and prioritizes this processing, even when it is in conflict with heavy seasonal demand.

“The Butte school foodservice included that they were using our product on their school menu that they sent home. I thought that was beneficial. Students start realizing where their meat comes from.”

As a full service processor, Ranchland Packing has the ability to provide additional value-added processing of beef to schools. Examples include fresh or frozen beef patties separated with wax paper and bulk packaging of ground beef. In recent years, a cattle producer and distributor partnered with Ranchland Packing to acquire a julienne-cut machine which can efficiently cut strips of beef for stir-fry or fajitas. This opportunity was tied to the producer pursuing a beef to university contract.

Ranchland Packing services minimal delivery routes with their own truck and contracts most other distribution services. Silo Processing, a state inspected facility, delivers Dillon School District's beef in its logged refrigerator truck. This beef to school processing and distribution chain adheres to food safety regulations from inspection and slaughter to transit and delivery.

Beef to School Costs

The cost of processing, as a component of the price of local beef, is a holistic challenge. In the case of Dillon School District, Ranch-

land Packing is merely providing processing services on a set fee schedule, based on weight. When Ranchland Packing sells meat to schools, they look towards the livestock market for current prices and then set their margin at a bare-minimum profit. Though volume discounts are offered by Ranchland Packing, and many other processors, schools rarely achieve the necessary volume.

Ranchland Packing focuses on quality of beef over quantity. They focus their product on “niche” and “better quality,” rather than “bulk” and “cheaper.” Justin Fisher notes that lower priced conventional beef, and cheap imported beef, have conditioned consumers to expect beef to be relatively inexpensive in multiple markets. In the context of foodservice, school buyers are also conditioned to the affordability and availability of conventionally supplied beef and USDA Foods beef. School purchasers must recognize the quality associated with sourcing local beef in order to pay a higher price.

Dillon School District works with the local community to source and cover the cost of the cattle. Most of the time, a community partner covers the cost of cattle processing. Dillon School District has paid the cost of cattle processing occasionally.

Beef to School Program Needs

Ranchland Processing uses the just-in-time philosophy of supply chain management, processing beef based on client needs and orders. This business philosophy significantly limits the amount of beef that is processed and stored without an immediate market for the product. As such, schools are required to organize their beef ordering needs with plenty of time for processing.

From the processor's view, the amount of refrigerator or freezer storage schools have for beef could be a limiting factor. It is difficult for schools to take advantage of the price modifications resulting from larger purchases due to storage of frozen products. Schools aim to minimize their inventory, while not running out of product.

Ranchland Packing recognizes that their federal inspection status is an asset to their business. While state inspection is equal in quality and food safety assurances to federal inspection, Ranchland Packing notices that institutions, including schools, may perceive the federal inspection as superior.

Sustaining a Beef to School Program

Community support and awareness that local beef is an option is necessary for sustaining current beef to school programming. Producers and processors appreciate when school foodservices ac-

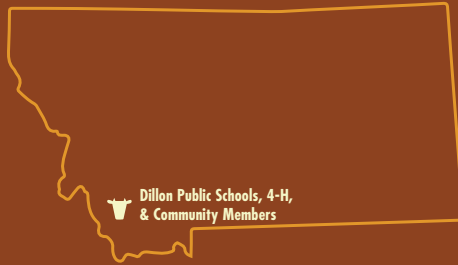
knowledge the local beef providers through menus or announcements. Justin Fisher notes, “The Butte school foodservice included that they were using our product on their school menu that they sent home. I thought that was beneficial.” It is difficult to measure the direct monetary benefit of marketing producers' or processors' relationship with schools, but the acknowledgement provides recognition that the beef to school partnership exists and perpetuates community support for continued programming.

The Future of Beef to School for Ranchland Packing

Ranchland Packing has a track record for working with school clients and is capable of increasing their client base. If planned carefully, school contracts have the potential to help distribute processing more evenly throughout the calendar year. Though school business is a small portion of their overall business, Ranchland Packing welcomes expansion in school contracts and geographic distribution of their beef to school programming.



BEEF TO SCHOOL AT DILLON SCHOOL DISTRICT



Schools Involved

Parkview School, Elementary School, 477
Dillon Middle School, 235
Beaverhead County High School, 332

Number of School Lunches Served Per School Day
575-600

School foods prepared in
Central Kitchen

Foodservice Staff in Case Study

Foodservice Director – Pam Scott

School Lunch Participation Rate

Beaverhead County (2014) – 55.44%

Local Beef Dishes Served

Hamburgers
Other dishes on occasion such as chili



School Demographics

Dillon School District is located in Dillon, Beaverhead County, Montana. The district consists of three schools, including Parkview Elementary School, Dillon Middle School, and Beaverhead County High School. In 2015-2016 enrollments ranged from 235 students at Dillon Middle, 332 students at Beaverhead High, and 477 students at Parkview Elementary. During the same school year, Dillon School District served all schools from a central kitchen located at Parkview Elementary School. Approximately 650 students, and between 575 and 600 meals per day were served. In 2014, 55% of students participated in the school lunch programs across Beaverhead County.

Pam Scott has been the Foodservice director at Parkview Elementary School since 2011. Prior to taking on this role, Pam owned and operated a family business.

Beef to School Program

History

Dillon School District began to use local beef for hamburgers on their school menus years ago when businesses in the community began bidding on and purchasing show animals from 4-H students during the fall fair. 4-H is an agricultural education program with an arm that is dedicated to teaching youth how to raise and market animals. Once purchased, the businesses did not know how to use the animal and decided to donate the beef to be served in the Dillon school cafeterias. When Pam Scott became the foodservice director in 2011, she continued to accept local meat donations from the community. Beef and pork are donated every fall through 4-H. Beef has also been donated towards the end of the school year from local ranchers when stocks run low.

“ I think it is great to eat local beef because the beef is already here, why shouldn't we be buying it here? ”

What is Local Beef?

Local beef is sourced from Beaverhead County based upon the availability of donations to the foodservice. Though most donated animals were raised in the county, they are processed or delivered by local and neighboring processing facilities including Ranchland Packing in Butte, L and S Meat Processing in Dell, and Silo Meats in Dillon. State or federal meat inspection of the processing facilities is required for schools to source meats.

Why Local Beef is Used in the Foodservice

Local donated beef has been a part of the Dillon menu now for a number of years. The community is proud that the school accepts and serves local donated beef to its students. In fact, on the days that local burgers are on the menu, parents often eat in the cafeteria alongside the students. As such, the foodservice director attempts to keep local beef is on the menu. Many of the students that attend schools in this district are connected to the ranching community in some way.

The foodservice believes that the local beef is higher in quality than other beef – they observe that the local beef cooks off less fat and water. While Pam Scott does not think that the majority of students notice the difference in the quality of beef, the 4-H students who have raised the animals are proud to know that “their” steer is on the menu that day.

Connecting with Processors and Producers

Dillon School District works with a variety of individuals and organizations to receive donated local beef. Dillon youth raise beef cattle for showing in the 4-H program. Community businesses and individuals purchase the steers raised by the students at the local 4-H live-stock auction. The community businesses and individuals who wish

“ I think it was really cool when someone heard that we were running low on hamburger patties, and they decided that shouldn't happen. So they put their foot forward and did something about it by donating more beef to the foodservice program. ”



to donate the beef to the school then coordinate with the school Foodservice director to determine processing and delivery. As word about Dillon's donation model spreads, more community members express interest in purchasing animals raised by the 4-H students to donate to the foodservice. A number of ranchers within the county have also expressed interest in contributing livestock to the district.

Typically, Pam Scott will ask the donor where they prefer to have their animal processed, Ranchland or L and S. Sometimes donors pay for the processing, while other times the school pays for the processing. An employee of Silo Meats picks up and delivers the beef to the school from both Ranchland Packing and L and S Meat Processing. This employee has a refrigerated truck which is then used to transport the meat, in compliance with food safety regulations, to the foodservice in Dillon.

Gaining Support for Beef to School Program

Local beef is currently marketed by word of mouth, menu descriptions, and school communications. Informing the community that the beef on the menu is local is one of the most effective marketing tools for the school. The monthly school newsletter names the individual, community member, or business who donated beef. There is a large and very noticeable chalkboard that hangs in the cafeteria wall that lists all donors of all food types to the school. Local beef is not highlighted on the menu until it is stocked in the freezer to ensure that the product will be on the lunch tray if advertised.

The foodservice recognizes the benefits of educating students about eating locally. But, expanding education about local food and sustainable agriculture beyond the context of school lunch does not appear to be a possibility at this point in time due to a lack of resources for a dedicated farm to school program.

"I think our school is really fortunate.
We live in a very generous
community of great people."

Type of Beef Used in the Foodservice

Dillon's foodservice uses a combination of USDA Foods (formerly known as commodities) and donated beef from the community. The

"We have a large board up in the cafeteria that lists the people's name that donate. The administration sends a nice thank you to the donor and includes the amount that can be used as a tax deduction for the donor."

donated beef varies in breed and whether it is grass-fed, grain-fed, grass-finished, or grain-finished by who decides to donate the beef. All beef is received frozen. Approximately forty cases of commodity beef are ordered per year and are commonly served in recipes such as spaghetti sauce, tacos, casseroles, chili, and soups. Four to five head of cattle are donated per year and are processed primarily into burger patties and ground bulk. On occasion, beef from a donated animal may be processed into tri-tip, prime rib, and other roasts. All beef is thawed and prepared as needed.

Beef to School Costs

Burgers are the main item on the menu to be made with local beef – and this beef has always been donated. Most beef items on the menu other than the burgers are made with USDA Foods beef. Although the foodservice offers to pay for the processing, very rarely have they had to do this. It should also be noted that all donations to the school are tax deductible.

The foodservice director admits that the district would not be able to afford to purchase local beef without donations. Having the donated beef has also allowed the foodservice to use a wider variety of fruits and vegetables due to the cost savings.

Sustaining a Beef to School Program

Dillon School District considers several factors key to sustaining local beef donations in the school cafeteria:

- Have adequate equipment and storage space to accommodate current donations in addition to the commodity beef that is purchased. Donations do not always come in on a schedule and this can be a challenge for space and storage.
- Have the support of the superintendent to receive, serve, and market local beef.
- Make donations stretch to last the entire school year by careful menu planning and ensure that donations arrive consistently throughout the year.

- Serve and source local beef that is safe. Donated beef is always processed at a USDA certified plant and standard thawing, cooling, storage, and cooking procedures are followed.
- Consider the possibility of utilizing other products like lentils or mushrooms to extend the amount of beef used, allowing for increased funds for other foods and to meet national school meal guidelines.

The Future of Beef to School

Moving forward, Dillon School District aims to incorporate more local beef and less commodity beef on the menu. A big piece of this puzzle is involving community members in the donation process and capitalizing on the sense of community that exists in Dillon. As Pam Scott states, "People work so hard and that's why it's so wonderful that somebody can feel like they can donate that big of a gift."

Chili

Serving Size: 3/4 cup Yield: 500

Montana ground beef, raw	40 lbs
Pinto beans	#10 can 13 cans
Kidney beans	#10 can 13 cans
Tomato sauce	#10 can 6 cans
Diced tomatoes	#10 can 1 can
Garlic powder	1 cup
Minced onion, dehydrated	4 cups
Chili powder	3 cups
Shredded Cheese, to top	

1. Brown ground beef. Drain excess fat.
2. Add browned beef and all remaining ingredients except cheese to a large soup pot. Stir well to combine. Cook 1-2 hours.
3. Serve with 1oz of cheese on top.

BASIC SCHOOL FOODSERVICE VOCABULARY

Central kitchen: ingredients assembled, food produced, and held at safe temperatures in a main kitchen, delivered to satellite school kitchens, and then served to customers in the satellite school

Conventional kitchen: ingredients assembled, food produced, and held at safe temperatures in an on-site school kitchen and then served to customers in the same school

Food miles: a unit of measurement used to determine in miles how far foods travel from producer to consumer

Free or reduced school meal: a child receives a school meal at a free or reduced rate because the family's income is 130 to 185 percent of the poverty threshold and the school foodservice gets reimbursed for the reduction in price

IQF (individually quick frozen) foods: foods that are frozen quickly in individual pieces so that they are preserved separate and not in a block when bagged and held frozen

Participation rates: a percentage determined by the number of students that purchase school lunch divided by the total number of students attending the school

USDA Foods: United States Department of Agriculture program that provides foods purchased in bulk by the federal government to schools for minimal cost

BASIC BEEF CATTLE VOCABULARY

Beef: meat from cattle (bovine species) other than calves

Bull: intact bovine male, usually of breeding age

Calf: young male or female bovine animal under 1 year of age

Cow: sexually mature female bovine animal that has usually produced a calf

Cow-calf operation: management unit (ranch or farm) that maintains a breeding herd and produces weaned calves as their primary product

Cull (noun): animal eliminated from the breeding herd, typically over 36 months of age

Custom cutting: generally, a single animal or small group is slaughtered, cut, and packaged according to an individual customer's specifications; may happen under facility inspection or exemption from inspection

Custom exempt: inspection exemption only for processing privately owned cattle for same client; labeled not for retail sale (grocer, institution, or restaurant)

Federally inspected: inspection at a slaughter and or processing facility conducted by a USDA inspector; required for interstate commerce

Feedlot: enterprise in which cattle are fed grain and other feeds for usually 90-120 days

Finished Cattle: cattle whose time on a finishing program (grass or grain) is completed and are now ready for slaughter; generally at 18 to 30 months of age

Grain finished: after a calf has been weaned, it is finished to slaughter weight on grain or other concentrate feeds for several weeks; usually under 20 months of age

Grass finished: a weaned calf continues to grow and is finished to slaughter weight on grass and hay; usually greater than 20 months of age

Heifer: young female bovine cow prior to the time that she has produced her first calf

State inspected: inspection at a slaughter and or processing facility conducted by a designated state agricultural or livestock agency; products restricted to intrastate commerce

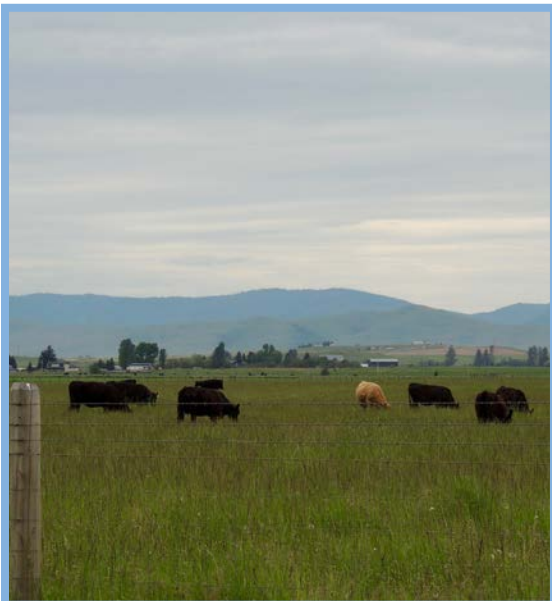
Steer: bovine male castrated prior to puberty; most commonly finished animal for beef

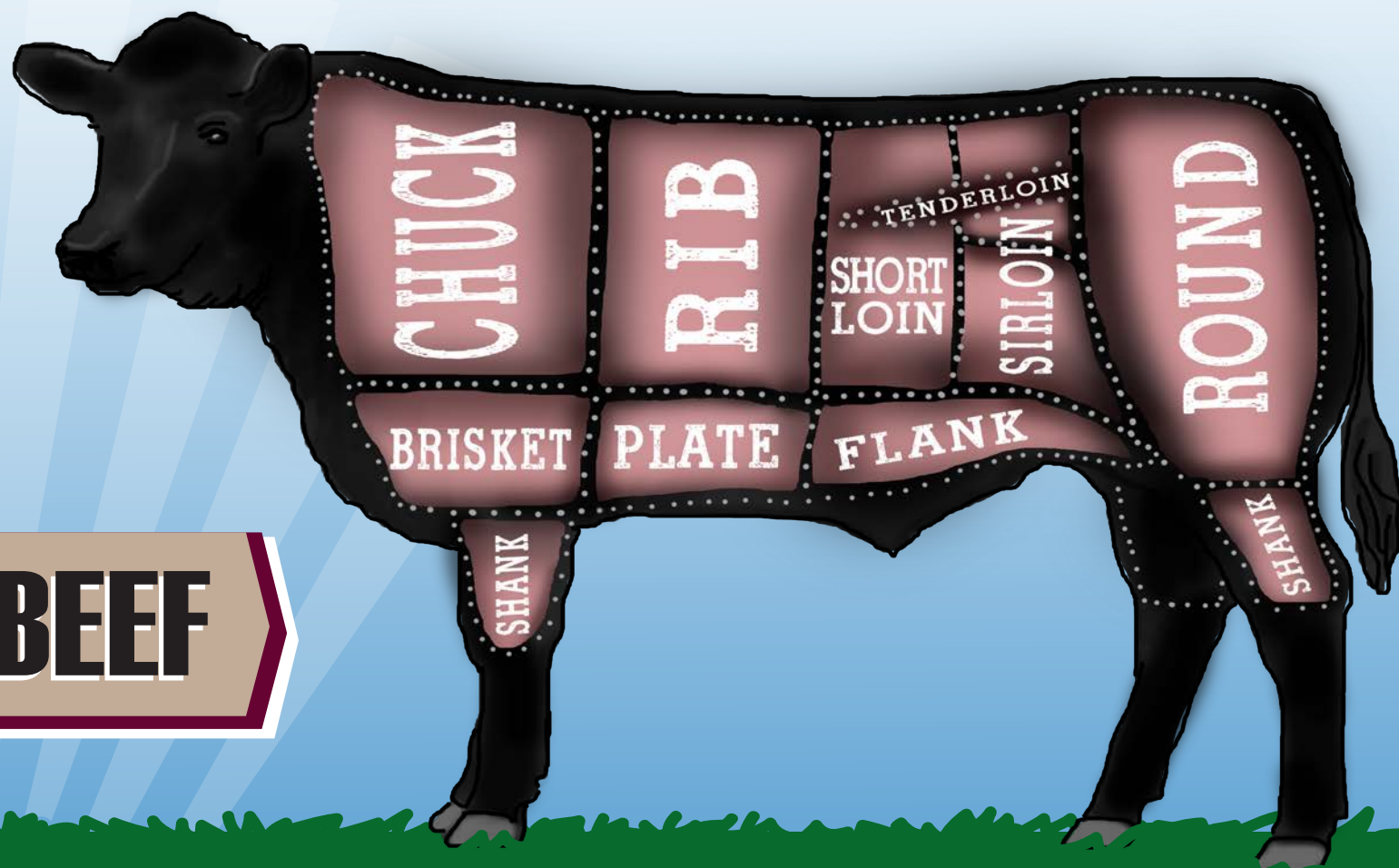
Vertical integration: value added business model where a single entity owns and manages multiple stages of production and processing

Basic beef vocabulary adapted from National Cattlemen's Beef Association Glossary of Terms

REFERENCES AND RESOURCES

- Montana Department of Livestock. Meat and poultry inspection. <http://liv.mt.gov/mi/default.mcp.x>
- Montana State University Extension. Animal and Range Sciences Extension. <http://animalrangeextension.montana.edu/>.
- Montana State University Extension. Extension beef cattle program. <http://animalrangeextension.montana.edu/beef/resources.html>.
- Montana Office of Public Instruction. Facts about Montana education 2016. <http://opi.mt.gov/pdf/Measurement/EdFacts2016.pdf>.
- Montana Office of Public Instruction. Montana school nutrition program: 2015 annual report. <http://opi.mt.gov/pdf/SchoolFood/15SNPAAnnualReport.pdf>.
- Oklahoma Department of Agriculture, Food, & Forestry. How much meat? <http://www.oda.state.ok.us/food/fs-cowweight.pdf>.
- School Nutrition Association. School meal trends and stats. <http://schoolnutrition.org/AboutSchoolMeals/SchoolMealTrendsStats/>.
- South Dakota State University Extension. How much meat can you expect from a fed steer? <http://igrow.org/livestock/beef/how-much-meat-can-you-expect-from-a-fed-steer/>.
- United States Census Bureau. <http://census.gov/>.
- United States Department of Agriculture. School meals: Child nutrition programs. <http://www.fns.usda.gov/school-meals/child-nutrition-programs>.
- United States Department of Agriculture. The farm to school census. <https://farmtoschoolcensus.fns.usda.gov/>.
- United States Department of Agriculture. USDA's national agricultural statistics service Montana field office. https://www.nass.usda.gov/Statistics_by_State/Montana/.
- University of Tennessee Institute of Agriculture. How much meat to expect from a beef carcass. <https://extension.tennessee.edu/publications/Documents/PB1822.pdf>.





CUTS of BEEF

Chuck (27%*)

Chuck Eye Roast, Boneless
Top Blade Steak, Boneless
Arm Pot Roast
Shoulder Pot Roast, Boneless
Mock Tender Roast
Blade Roast
Under Blade Pot Roast
7-Bone Pot Roast
Short Ribs
Flanken-Style Ribs
Cros Rib Pot Roast

Brisket (4%)

Whole Brisket
Brisket
Point Half
Corned Brisket
Flat Half

Shank (3%)

Shank Cross Cut

Rib (10%)

Rib Roast, Large End
Rib Roast, Small End
Rib Steak, Small End
Rib Eye Steak
Rib Eye Roast
Back Ribs

Plate (8%)

Skirt Steak
Ground Beef

Ground (made from a % of various cuts)

Regular, Various Parts of the Cow
Chuck, Chuck Trimmings
Round, Round Trimmings
Sirloin, Sirloin Trimmings

Flank (5%)

Flank Steak
Flank Steak Rolls
Ground Beef

Short Loin (10%)

Top Loin Steak, Boneless
T-Bone Steak
Porterhouse Steak
Tenderloin Roast/Steak

Sirloin (7%)

Top Sirloin Steak
Sirloin Steak
Tenderloin Roast/Steak
Beef Tri-Tip

Round (22%)

Round Steak
Top Round Roast
Top Round Steak
Bottom Round Roast
Top Round Cap Off
Tip Roast Cap Off
Eye Round Roast
Tip Steak
Boneless Rumb Roast
Miscellaneous (4%)

* Percent of total hot carcass