



Responses to Questions from the Community about EDFC's Meat Studies

(Further questions can be addressed by calling EDFC at 707.467.5901 or by email at info@edfc.org)

1 How is this study different from the previous?

The preceding study was an overall feasibility of meat processing in Mendocino County. This study reviewed the financial feasibility of a much smaller scale plant; it will also have a business plan ready for an entrepreneur to implement. This year's study also included an extensive review of nontraditional sources for financing the project.

2 What is EDFC's role in the project?

EDFC has been the fiscal sponsor of the two Economic Development Administration-funded studies. EDFC's mission is to "Connect money and ideas with entrepreneurs to create sustainable prosperity in Mendocino and Lake Counties". In alignment with this mission, EDFC will seek to find an entrepreneur to take on the project.

3 Meat processors across the country are losing money and going out of business—why start one here?

Large-scale commercial meat processors operate in a highly competitive, low-margin sector. The proposed project will cater to the fast-growing specialty market that is interested in locally-produced, grass-fed, naturally produced meat. This higher margin sector, coupled with 'patient' or 'social-impact' capital from investors seeking to improve food quality and develop resilient food production infrastructure, make this a viable project. Furthermore, having a local processing facility would support local ranchers by making it possible for them to stay in business.

- 4 How far into the future will the scale of the facility that is planned meet the needs of ranchers? Is it big enough?

First, the initial scale is big enough if all of the producers interviewed (19) that are doing direct marketing were to use it immediately. The analysis assumes that not all of those producers would switch immediately; full utilization would not occur until the fifth year. Secondly, as demand increases, capacity can be increased in either or both of two ways. With a double shift, the facility's capacity could double. Also, the facility will be designed to easily accommodate physical expansion using modular units on the 3+ acre site that is recommended.

- 5 Shouldn't the plant operators consolidate slaughter days to 1-2 days/week for inspector and employee costs, reduce water costs etc.?

In all likelihood, slaughtering operations would be scheduled 1 or 2 days per week. Most small plants slaughter one or two days per week and then cut and wrap the other 3 or 4 days. One of the manager's tasks is to schedule when and how many animals come into the plant on the slaughter days to make sure the animals are not in holding pens overnight. If an individual rancher needs more livestock processed, then they either have to bring in smaller lots over more weeks or find a larger processor. Ranchers would need to schedule their processing to fit with the facility's ability to handle the numbers. This could require scheduling months in advance. The rancher could control timing by using such strategies as putting animals on feed at different times, having animals of different ages, and so on, so that animals would not be held for several months after reaching processing weight. Holding animals after that time results in overfinished animals who are overweight, resulting in excess waste or trim as well as the higher costs of feeding the animal for a longer period of time. That's what happens at all the other plants that our direct marketing ranchers are currently using. This plant would be more economical since the drive times are shorter, i.e. within the county borders. There is no cost for the USDA inspector if it is an eight-hour day.

Additional resources:

USDA Food Service and Inspection Service, *Small Plant News Vol. 6, No. 5*

<http://www.fsis.usda.gov/wps/portal/fsis/newsroom/meetings/newsletters/small-plant-news/small-plant-news-archive/spn-vol6-no5.>)

With regard to water use, the highest consumption of water will be for the sanitation of the slaughter floors and the processing rooms, and the quantity of water used will depend on the sanitation protocols that are developed.

With regard to employees, these costs will remain the same once the plant is at capacity. There will be slow periods as there is with any business, but due to the skills needed to work in this area, the owner will want to keep the employees on payroll.

- 6 What is a realistic picture of holding time and number of animals at the location at any given time?

While the exact number cannot be provided, the majority of animals would be held for only a few hours. In some cases, animals might be there for most of the work day, and in rare cases, overnight. At capacity, the plant will process 30 animal unit equivalents per week.

Stress in general, and especially long-distance transport stress, can cause meat quality problems; this is well documented in the scientific literature. In stressed pigs, the meat can take on a pale color, soft and watery condition known as PSE pork. In pigs, cattle and less so in sheep and goats, severe stress can cause the meat to become dry, firm and dark in color and is known as DFD (Dry, Firm, Dark) or Dark Cutters. A local plant would actually help to minimize transport stress by reducing the time to under 1 and a half hours for most locations within Mendocino and Lake Counties.

Just as shorter transport times are recommended, so are shorter holding times. Veterinary research shows that longer holding times can result in stress to the animals. There is no advantage from an economic, meat quality, or animal welfare standpoint of holding animals for more than 3 hours prior to slaughter.

An additional resource:

www.fsis.usda.gov/wps/wcm/connect/175cda99-ece9-48de-9f75-95499ac3cee7/PHVt-Humane_Handling.pdf?MOD=AJPERES

7 Wouldn't bigger holding pens be helpful?

That might be true, but larger holding pens aren't necessarily in the best interest of the community or the processing plant. More animals at the plant represent both a liability and an unnecessary cost to the facility. The plant manager's job, among other things, is to schedule the work flow so too many animals aren't on site at any one time. Off-site areas could be used for holding animals, if necessary. The Ukiah Livestock Auction Yard (ULAY) has facilities that could hold, feed and water a significant number of animals, but the rancher would have to pay for this service. This idea would be a good idea for ULAY to explore as it now sits largely unused. However, any landowner could provide this fee-for-service, if a rancher were concerned about having a full truck and trailer load.

8 Related to the treatment of waste water, what alternative methods to the municipal waste system have been considered for waste water treatment and disposal, at what additional cost? Would an alternative system offer wider location options that the community would support more easily?

The report highlights that this facility requires in-plant pretreatment before wastewater goes to a municipal system from a purely economic standpoint. California has very stringent wastewater discharge requirements. This is why the current study focused on siting the plant close to municipal sewer services. Wastewater cannot be held in unlined ponds because this contaminates the groundwater. Siting a meat processing plant on agricultural property that does not have access to municipal sewer services would require review and approval of its wastewater treatment by the North Coast Regional Quality Control Board. Such an approach would require significant investment in wastewater treatment equipment, as well as having a professional staff hired by the plant to maintain and operate the plant's wastewater treatment facility. The small scale of the proposed plant does not provide the profit margin needed to absorb the costs to build and operate an onsite wastewater treatment facility. However, water consumption could be reduced through the use of conservation technology, such as lower flow/high pressure hoses, etc. Using the latest technology is essential from cost, efficiency, and environmental standpoints.

9 What happens to the Offal?

Offal, also referred to as “by-products”, is the term used to describe the viscera and trimmings of a butchered animal removed in processing. In the US meat industry, every component of the butchered animal gets used or recycled. Meat by-products can be found in products ranging from makeup and medicine to apparel, fertilizer and pet food. All inedible by-products will be sent to a rendering facility for further processing. The proposed plant size is too small to do its own rendering.

North State Rendering in Oroville serves the North Coast region and would service the proposed plant. For regular weekly pick-ups, it would charge \$150 per 1,000 pound container. Offal must be refrigerated, so the plant design includes a separate cooled area for the offal storage.

10 Who approves location decisions?

Local government agencies involved with land use issues will approve the location of the plant. A meat processing plant is a permitted use on industrial property in Mendocino County. It may also be allowed as a special use on agriculturally zoned property. It would not be allowed in residential areas. CEQA would need to be followed.

11 Will the facility be located near residences? What impacts related to odor, noise and air quality have been researched?

The odor inside the processing plant would be stronger than what one could detect at the meat counter in a grocery store. Outside the plant, odors would be negligible. If there were a strong odor coming from a meat producing plant, the plant would be shut down until the source could be found. Sanitation dictates odor control, and bad odors in a plant are a particular concern to the plant manager and USDA inspectors as well as the community.

The consistent presence of animals will mandate holding pen cleaning protocols to remove urine and feces, which are the largest source of odors at a processing facility. Live animal noise and odor will be less than what the community experiences during the fair due to the small number of animals being received at the plant at any one time (30 animals per

week at the plant vs. 200+ animals at the fair). Having the plant on industrially zoned property further minimizes these issues and ensures that residential areas are not impacted any more so than they would be by other industrial users.

12 Other negative impacts on the community?

Economic Impact?

A meat processing plant in Mendocino County would have a **positive** economic impact on our community. A local meat processing facility contributes to the economic viability of our community, supports local ranchers, increases the availability of healthy, local food in our community, increases food security, maintains our “pastoral viewshed” and keeps farms and ranches viable so the next generation can stay on the land.

“Energetic” Impact on the community?

Some opponents of this project foresee a negative residue being left on the community due to the presence of a meat processing facility. Supporters reply that as a result of keeping the animals in closer proximity to their ranch homes, there will be benefits to the animals with less time in transit. Having a facility in our backyard, so to speak, will allow the oversight of the facility by ranchers and the community to assure that humane treatment/slaughter of the animals is occurring.

Tourism/ wine country impacts?

The facility’s scale is small and the type of building that would be built would resemble other working ranch style buildings in Mendocino County. Recommendations within the report also suggest screening the facility from nearby transportation arteries, meaning that most tourists would not even be aware of a processing facility, unless it were located in proximity to existing tourist destinations.

Mendocino County is a pioneer in green industries: our county prides itself on our reputation for high quality, and sustainable food production and we are rapidly gaining a reputation for those things. As a result, we expect to see increased demand for products of all kinds from Mendocino County. Other activities that bode well for a source for processed meats include the tourism industry’s interest in food and wine

pairing, as well as an interest in eating within the 50 miles or so area called our foodshed. To many in the tourism and wine industries, the availability of locally sourced meat would be a beneficial partnering of these two fields of agriculture.

Agritourism and culinary tourism are travel segments that are growing exponentially, with countless websites and travel guides dedicated to the subject. Travelers are seeking authentic food experiences that cannot be obtained elsewhere; cooking with local ingredients is the simplest way to achieve this. Mendocino County is already well-positioned to benefit from this trend. With its up-and-coming dining scene, Ukiah restaurants featuring local meats and produce are receiving high praise in Wine Spectator Magazine, Sunset Magazine, VIA Magazine, the San Francisco Examiner, and more.

Portland, Ore., USA (August 27, 2013) — *The World Food Travel Association (WFTA) today announced its new study of traveler behavior reveals that the way to tourists' wallets may be through their stomachs. Conducted by the travel market research firm Mandala Research and sponsored by the World Food Travel Association and other tourism organizations, their study shows that almost a third (30%) of travelers deliberately choose destinations based on the availability of activities related to local food and drink, whether it's a beer or wine festival, a farmer's market, or a farm to table dining experience.*

Property value impacts?

Property that would be appropriate for the meat processing facility would be zoned Industrial. These parcels are not next to residential neighborhoods.

13 What is the producer's commitment to the economic viability of the project?

Per the report, 58% of the producers interviewed who are currently engaged in direct local marketing are interested in investing in and supporting the project. As described in the report, there are several business structures that could involve consumers making a commitment to the economic viability of the project.

14 How much was the grant award and how much is left over, if any?

The original grant came from the federal government, the U.S. Department of Commerce Economic Development Administration. EDFC received approximately \$120,000 to conduct the study. \$112,000 was paid to UCCE & UC Davis to conduct the two year study, the remaining \$8,000 was paid to the project coordinator. The funds that UCCE & UC Davis received have been expended but the study authors, Shermain Hardesty and John Harper, are committed to prepare the Option C business plan per the contractual agreement with MEDFC.

15 Lot of public money has been spent; there needs to be an end date and turn it over to private industry.

True. The report is a public document and is the first of its kind in California. The hope is that private industry will use the detailed report to choose one of the business structures and build a plant in Mendocino County so that the benefits of public money will be realized locally. Since the report is available for download from the internet, it is available to others that may want to pursue a similar plant for their community.

16 Financial issues- Economic Viability from an operations perspective?

That was the objective of the study and report: to determine if a very small, "mom & pop" meat plant that only processed meat from locally raised livestock that would be marketed locally would "pencil out", i.e. be profitable. The study is on the EDFC website (<http://www.edfc.org/wp-content/uploads/2013/08/MCMP-Final-Report-2013-08.pdf>). Please refer to it for further details.

17 Was projected rainwater looked at since so much water would be used?

We assumed that the facility used 1,000 gallons of water per day, or 33 gallons per head of cattle. Processing of other foods & beverages can be more water intensive; for example, a recent PG&E survey of wineries in California found that their water usage per gallon of wine ranged from 1.5 gallons to 20 gallons and poultry slaughtering requires 5-10 gallons per bird and an additional 6-7 gallons to process a bird. Thus, 33 gallons to slaughter and process a head of cattle seems relatively low.

Also, given the high cost to discharge into the municipal wastewater system, the plant has significant incentive to use as little water as possible, because it has to be discharged. The state of water resources in California in general is a big concern; so is local food and maintaining local industry. Should water go to food production to offer safe, locally raised meat for the local consumer? Yes, we think the continued use of grazing resources in Mendocino County which would result from a local plant being available, offers one of the community's greatest opportunities to develop value-added food products and build on something we do well - raising grass fed and pastured raised animals.

If this question relates to potential runoff from holding pens, the Regional Water Quality Control Board has jurisdiction and it would require, as authorized by the Clean Water Act, a National Pollutant Discharge Elimination System (NPDES) permit

Additional resources:

Kennedy-Jenks Consultants. 2010. Energy Use in Wastewater Treatment in the Food and Beverage Industry at

http://www.calmac.org/%5C/publications/PGE_Energy-Use-WW-Treatment-Food-Bev-Industry_10-15-10_%28unlocked%29.pdf

<http://wineeconomist.com/2008/11/27/turning-water-into-wine/>

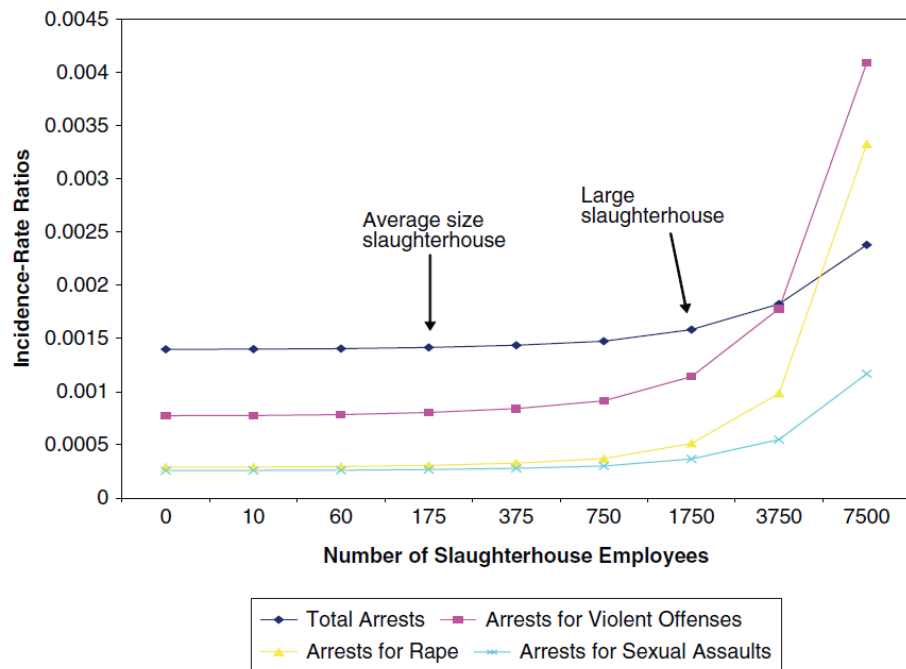
18 Will the jobs be living wage jobs? What will working conditions/benefits/career ladder be like?

See page 73 of the report for the salaries and benefits. According to the US Census for Mendocino County the per capita money income for 12 months (2011 dollars), 2007-2011 was \$23,585. The majority of the plant's work force would receive more than this, in addition to being provided a benefit package. Working conditions will be similar to those you can see at the supermarket butcher shops. The salaries and benefits used in the analysis are standard for the jobs described; however these are negotiable between the worker and the owners/operator of the plant. Several of the jobs require skills that not everyone possesses so it is reasonable to expect that the salary-benefit package needs to be attractive.

19 What about the stories that the presence of meat processing plants create a more violent community?

Several news media have written about this topic and all of their stories are based on a single study done by Amy J. Fitzgerald, Linda Kalof and Thomas Dietz. It was published in June of 2009 in an on-line journal entitled Organization & Environment. The full paper is located at <http://oae.sagepub.com/content/22/2/158>. The authors conclude from regression analysis that crime rates go up in areas where commercial slaughterhouses are located. Those commercial slaughterhouses that their data supports have greater than 175 employees as can be seen in Figure 1 below extracted from their paper. The slopes of the prediction equations stay flat from no employees (meaning no slaughterhouse) up to the 60 employee area on the graph. It would appear from this graph that a plant of only 6 employees (the number for the proposed plant) would not result in a more violent community.

Figure 1
Log Scale Prediction Equation Values for Total Arrests, Arrests for Violent Offenses, Rape, and Sexual Assaults



The small plant that is proposed is a much different environment than the plants where over 95 percent of our meat is processed. Therefore, it is highly unlikely that the findings of such a study, if it is valid, would apply to a 6-employee plant.

20 Where will the employees come from?

There's a good pool of potential employees that presently work as butchers for the large chain stores as well as those who work in existing custom-exempt (non-USDA inspected) slaughter and cut facilities in Mendocino County.

John Harper has received two resumes from women who have degrees in animal/meat science and either has moved or would like to move back to Mendocino County. Additionally there are training programs in meat science at Cal Poly, Chico State, and other colleges in the area.

21 Education related to animal rights; how do we address animal rights activists' concerns?

Not having a meat processing facility in Mendocino County will not stop the slaughter of animals. Animal rights brought forth by animal rights activists may never be adequately addressed. With regard to animal welfare, The **Humane Slaughter Act**, or the Humane Methods of Livestock Slaughter Act, (P.L. 85-765; 7 U.S.C. 1901 et seq.) is a United States federal law designed to decrease suffering of livestock during slaughter. It was approved on August 27, 1958. USDA Food Safety and Inspection Service inspectors at slaughtering plants are responsible for overseeing compliance, and have the authority to stop slaughter lines and order plant employees to take corrective actions.

Many new plants are also seeking 3rd party certification and this benefits the local producer as well. Third party certification can be associated with animal welfare. Noted researcher and animal behaviorist Temple Grandin consults on new slaughterhouse design. Having a small, new facility that is designed to meet the Humane Slaughter Act, including the curved chutes recommended by Dr. Temple Grandin, make it easier for the plant to have humane slaughter practices. It is to the plant's advantage to

design its facilities with animal welfare in mind as it protects food safety and meat quality.

Other humane handling resources:

<http://www.fsis.usda.gov/wps/portal/fsis/topics/regulatory-compliance/humane-handling>

<http://awic.nal.usda.gov/farm-animals/humane-slaughter>

<http://www.fsis.usda.gov/wps/wcm/connect/da6cb63d-5818-4999-84f1-72e6dabb9501/Comp-Guide-Systematic-Approach-Humane-Handling-Livestock.pdf?MOD=AJPERES>

- 22 What about the large quantities of manure that will be produced from holding animals?

In general, animals are processed within an hour or two of arrival. On rare occasions, they are dropped off the night before and processed first thing in the morning. Meat processing facilities are not interested in holding live animals for any extended period of time. Holding livestock for an extended period of time represents an increased liability for the processor, so it is desirable to process animals in a timely manner. The processor wants that animal in the cooler, not in the holding pen.

- 23 Prior to transporting terminal animals ranchers routinely hold animals off feed. Some animals do urinate and defecate in the trailer that they are hauled in, and the rancher usually cleans this out at home. The food safety goal is to prevent any type of cross contamination from the GI tract during processing.

- 24 What about methane production from manure etc.?

There won't be that much manure available. Waste to energy technology is not quite ready for methane production from animal tissues and blood – it might be 10 more years before experimental systems are available.

- 25 When there is a mix of organic and conventional livestock, is there an ability to maintain organic status?

Yes. The plant manager schedules organic slaughter and cut and wrap prior to a conventionally processed animal. This ensures that the integrity of the organic animal is preserved.

26 Will there be a distribution system, and what will that look like?

The financial analysis included costs associated with a delivery service of the processed meat into the Bay Area, including a truck, labor, fuel and insurance. Note that this is a service for individual ranchers; the plant will not sell any meat itself. Most of the ranchers who presently direct market are selling locally. A local plant would allow more ranchers who don't want to expand to the Bay area to provide more local, legally processed meat in the local area.

The ranchers who use the facility are the ones who decide where to sell their meat. Given Mendocino's County residents' interest in local food and the growth of "food tourism" (see response to Q.12), it seems very likely that some ranchers will market their meat locally (and some already do—see page 4 of the report), such as at Farmers Markets, CSA, the Co-op and other grocers, and numerous restaurants. Mendocino County is a very logical location to pair local wine with local meat, and to appreciate the terroir.

27 Do the animals need 10-12 hrs to rest before slaughter? If so, is there enough space to hold them?

See response to question 6. Pigs may need to rests for an hour, since this size plant would be processing animals from the same farm. If pigs from different farms are mixed together, they will fight; this causes additional stress for the animals.

28 Can a non-local entity buy the facility?

It would depend on the business structure chosen. If it is a privately held sole proprietor business, certainly that would be an option. If it were a locally owned cooperative then it would less likely to happen.

29 Is CEQA required?

Even though meat processing is a permitted use on industrial property, it would be subject to CEQA. The first review of the project would determine whether it qualified for a negative declaration or for a complete EIR.

30 Will all of the community planning and input processes be respected?

That has been the objective of the EDFC's Meat Committee. The smaller-sized plant and study came about directly from previous community concerns.

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Comments/Questions for an Owner/Operator from Ranchers

- 1 Producers need value added services (smoking etc.)

The plant is a service-only business. If the demand for added services is there, it's logical that the plant would strive to meet that demand.

- 2 Will custom slaughtered animals be cut and wrapped?

The processing facility would cater to ranchers who want to have a few animals processed and USDA inspected, so that the meat can be sold. There are also several custom-exempt butchers in Mendocino County who provide this service already for ranchers who want to consume meat produced from their own livestock, or who sell their livestock to consumers and make arrangements for the processing.

- 3 Plant needs a cool down cooler and aging cooler; the fresh animals are slaughtered, then moved to aging cooler

The proposed plant has a cool down cooler and an aging cooler. It is acknowledged that additional modular refrigeration units may be necessary, should more local producers wish to direct market. After reviewing the draft report with the Meat Committee, additional aging cooler space was added into the financial analysis. The proposed plant also includes costs and space for precooling the carcasses of other species that are not aged before processing.

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