

Products or Services

This section should give the reader a clear understanding of your product or service. Use visual material, such as photographs, sketches or digital images to increase understanding. Be sure to include any marketing material used to promote the product.

Points to include:

1. **Products or Services**
Description of product line or service. Discuss product features.
2. **Legal Protection**
Patents, copyrights, trademarks.
3. **Competitor Comparison**
Comparison to competitors' products or services.
4. **Regulatory Agency Requirements**
5. **Competitive Advantage**
Unique competitive advantages versus competition.
6. **Customer Benefits**
Benefits of your product to customers.
7. **Packaging**
Describe packaging requirements.

..... Sample Products or Services

①— Products or Services

Product or Services and Comparison to Competitors

- Custom processing to custom specifications, as volume.
- Traditional products, such as steaks, roasts, and ground beef.
- Packing will be individual wrapped, family-sized packages, shrink wrapped or in butcher paper.

③— Most competitors do these same things. The Marketing Coop difference, however, is not in the product cuts, but in the way the animals are raised, as with the natural beef. The coop's difference is in the consistent quality of the product, with a moister product than is traditionally provided in stores. An additional difference is in the service and relationships Marketing Coop establishes with the customer at the time of sale.

②— Legal Protection

Marketing Coop does not have any patents, trademarks or copyrights at this time.

④— Regulatory Agency Requirements

Larry and Linda's Locker Plant, which will be purchased by Cattle Producers Marketing Coop, meets all the required state and federal regulations. HACCP plans for products, OSHA training and plans for safety and environmental permits relating to sewage discharge are on file in the plant office. Copies of any of these documents will be provided upon request. To ensure all requirements are met in the future, the company will hire Ted Tobias who is experienced in all these areas.

Competitive Advantage and Customer Benefits

⑤— Based on the company's analysis as seen in the tables provided earlier and in information provided on marketing trends and increased interest in natural

⑥— products, Marketing Coop believes its biggest competitive advantages are in the following areas:

- The coop can supply natural meat product, custom processed to the customers' specifications.
- Marketing Coop can supply an alternative product of traditionally raised beef, also processed according to customer specifications.
- The company will establish a close marketing relationship with its customers, building trust in the company and its product.

Of course, like its competitors, Cattle Producers Marketing Coop has always offered full refund to dissatisfied customers.

⑦— Packaging

Products will be sold two ways, fresh or frozen. All fresh products will be sold only from the retail store at the locker facility, wrapped in the traditional butcher paper. The emphasis for product sales will be with frozen product. This product also will be wrapped in butcher paper. As do the competitors, we will wrap the meat sold in any combination of sizes, pounds and product mix the customer desires.

For orders to be shipped to customers, United Parcel Services (UPS) will be used. UPS and USDA packaging guidelines will be followed. Insulated containers with product wrapped in gel refrigerants will be the primary means of shipment.

Products or Services Regulations

(Although the following material is based on resources tied to the pork industry, the crossover into the beef industry makes it relevant.)

On a national level, five primary government agencies are involved in meat processing. They are the United States Department of Agriculture's Food Safety Inspection Service (USDA, FSIS); the United States Environmental Protection Agency (EPA); the United States Department of Labor's Occupational Safety and Health Administration (OSHA); USDA's Grain Inspection and Packers and Stockyards Administration (GIPSA); and the Food and Drug Administration (FDA).

Under the Federal Meat Inspection Act, FSIS inspects all meat sold in interstate and foreign commerce. FSIS inspects at all levels of production: slaughter, processing, handling and packaging. In addition, FSIS sets standards for food ingredients, additives and compounds used in further processed products. Finally, FSIS also sets labeling standards and approves labels for meat.

The specific federal rules on inspection are contained in the Code of Federal Regulations, Title 9, Volume 2, Chapter III, "Food Safety and Inspection Service, Meat and Poultry Inspection, Department of Agriculture," Parts 301-417. The complete rules may be found at www.access.gpo.gov/nara/cfr/waisidx/9cfrv2.html#301. Following is a listing of the parts and topics of the rules to provide some idea of their scope.

■ CFR, Title 9, Volume 2, Chapter III, Parts 301-417

- 301 Definitions
- 302 Application of inspection and other requirements
- 303 Exemptions
- 304 Application of inspection grant or refusal of inspection
- 305 Official numbers; inauguration of inspection; withdrawal of inspection; reports of violation
- 306 Assignment and authorities of program employees
- 307 Facilities for inspection
- 308 Sanitation
- 309 Ante-mortem inspection
- 310 Post-mortem inspection
- 311 Disposal of diseased or otherwise adulterated carcasses and parts
- 312 Official marks, devices and certificates
- 313 Humane slaughter of livestock
- 314 Handling and disposal of condemned or other inedible products at official establishments
- 315 Rendering or other disposal of carcasses and parts passed for cooking
- 316 Marking products and their containers
- 317 Labeling, marking devices and containers
- 318 Entry into official establishments; reinspection and preparation of products
- 319 Definitions and standards of identity or composition
- 320 Record, registration and reports
- 321 Cooperation with states and territories
- 322 Exports
- 325 Transportation
- 327 Imported products

Under the Federal Meat Inspection Act, FSIS inspects all meat sold in interstate and foreign commerce. FSIS inspects at all levels of production: slaughter, processing, handling and packaging.

- 329 Detention, seizure and condemnation; criminal offenses
- 331 Specific provisions for designated sites and territories and for designation of establishments which endanger public health
- 335 Rules of practice government proceedings under the Federal Meat Inspection Act
- 350 Special services relating to meat and other products
- 351 Certification of technical animal fats for export
- 352 Exotic animals; voluntary inspection
- 355 Certified products for dogs, cats and other carnivora; inspection, certification and identification as to class, quality, quantity and condition
- 390 Freedom of information
- 391 Fees and charges for inspection services and laboratory accreditation
- 416 Sanitation
- 417 HACCP systems

■ Federal Inspection

Meat inspection is administered by the USDA. The Food Safety and Inspection Service (FSIS) regulates products containing more than 2 percent cooked meat/poultry and containing more than 3 percent raw meat. The FDA regulates the manufacturing of meat sauces and most soups.

In 25 states, including Iowa, meat inspection can be administered by state inspectors. States can have their own meat/poultry inspection programs if their requirements are "at least equal to" federal requirements. Meat inspected through state inspection can only be sold in the state where it was inspected.

Meat inspected through state inspection can not be sold interstate, including sales over the Internet. The following are exceptions to meat inspection:

- Slaughtering animals for personal use or custom slaughtering animals for their owners (all such products must be kept separate from inspected products and marked NFS (not for sale).
- Processing only parts – less than one-half of a carcass (100 pounds = 1/2 hog carcass), cutting grinding, etc.

Federally-inspected meat and poultry plants must comply with a host of regulations that stem from the 1906 Federal Meat Inspection Act and other regulations that have been enacted since then. The regulations are designed to keep contaminated and/or misbranded production from entering the marketplace.

The Humane Methods of Slaughter Act of 1978 requires humane handling in connection with slaughter of livestock. Livestock must be rendered insensitive to pain prior to shackling/hoisting. A humane method of slaughter is by a single blow, electrical, chemical or any other means that is rapid and effective. Other approved methods are given only for religious purposes.

The laws and regulations mandate "continuous" USDA oversight in plants, which has led to a staff of 8,000 inspectors scattered nationwide among some 6200 plants. About 65 percent of USDA's inspection workforce is comprised of slaughter inspectors.

Establishments must contact their regional director for an inspection application. If the location or ownership of an establishment changes, a new application must be filed.

Before applying, the applicant needs:

- Written sanitary standard operating procedures (SOPs).
- Certification that the establishment will not violate water quality standards outlined in 21 (b) Federal Water Pollution Control Act.
- A HACCP plan.

Site requirements for inspection:

- For USDA employee – office space with furnishings, light, heat janitorial services, lockers (locks and keys held by USDA employee), facilities to change clothing (for establishments with less than 1/4 time, these facilities may be located adjacent to the site).
- For ante-mortem inspection – pens and alleys that are paved and well drained, with hose accessible, adequate lighting and areas to separate suspect and condemned animals.
- For inspection – racks to retain organs, tables for inspection, water-tight metal trucks for holding diseased carcass/parts, areas for condemned products, retention rooms for final inspection of suspected products with USDA locks and keys, lockers for brands and devices and certificates with USDA locks.
- All containers for suspect or condemned products must be marketed conspicuously with letters of at least 2 inches stating, “US CONDEMNED” or US RETAINED.”
- Lighting – minimum of 50 candle feet, shadow-free in inspection areas.
- Laboratory with hot and cold running water, soap and clean towels.
- Each establishment is assigned an identification number (one and only one) to identify products. This number will be on all stamps, badges and certificates used by USDA.
- Inspection will be suspended if conditions are unsanitary or inhumane.
- USDA employee/inspector must be given access upon demand to facilities 24 hours per day, seven days per week. The inspector’s numbered badge is sufficient identification for access to the facility.
- A full-time inspector will work at an establishment eight hours per day, five days per week, paid by USDA. Any overtime or holiday time must be requested and paid for by the establishment.

Resource: Case Studies of Value Added Pork Production Marketing, National Pork Producers Council (NPPC).

Inspectors must be present during slaughter and processing operations covered on “patrol” bases. All animals must be inspected before slaughter. The inspector observes the livestock at rest and in motion. After slaughter, veterinary medical officers examine all carcasses. In 1996, 137.6 million meat carcasses were inspected and .40 percent (546,400) were condemned.

Inspection is required for all further processing. There is a reinspection of raw/incoming product and continuous oversight of sanitation and all other facets of plant operations affecting safety/quality of finished product.

In 1996, the USDA published a new regulation called the Pathogen Reduction/HACCP Rule. Under this rule, plants must operate according to comprehensive HACCP plans for each product produced in each plant. The HACCP rules were phased in according to plant size, but by January 2000, all meat and poultry plants were to have HACCP plans in place.

Hazard Analysis Critical Control Points (HACCP)

HACCP is a safe food production system originally developed by the Pillsbury Company to assure safe foods for astronauts. The National Academy of Sciences and many other groups have endorsed HACCP as the most effective way to prevent physical, chemical and microbiological hazards in foods.

Additional information about HACCP and ISO 9000 Quality Standards is provided in the following chapter.

Under HACCP, companies examine the way they make each of their products. They try to determine where problems can arise in the process, and they take steps to prevent those problems from occurring. Companies compile all of this information into a HACCP plan.

Under HACCP, the responsibility for ensuring the safety of the meat and poultry shifts from the inspector to the company. The inspector will maintain a strong and continuous presence in plants, but where the inspector previously looked for problems that already had occurred, under the new system, they check records and monitor plant activities to be sure that all plants are taking the best possible steps to prevent problems.

What is a specific example of how food production and inspection might change as a result of the rules? The American Meat Institute on its home page (www.meatami.org) offers the following example.

Years ago, USDA issued several pages of detailed instructions on how to cook roast beef. The regulations included cooking the roast beef at temperatures ranging from 130° to 145°F for carefully prescribed time periods at specific humidity levels. Inspectors checked the internal temperature of the roast beef produced to ensure that the company had met its temperature requirements.

Under a HACCP program for cooked roast beef, a company would develop its own production and food safety plan that takes into account the particular type and flavor of roast beef that the company wishes to produce and the particular “critical control points” associated with that unique product. Perhaps the company wishes to use dry heat, for example. Under the traditional regulations, there was a humidity requirement for cooking roast beef. Under the new regulations, so long as the dry heat achieves the safe food temperature goal, the method is acceptable.

All HACCP plans for cooked roast beef share the same goal as traditional regulations for roast beef: Salmonella elimination. But under HACCP, the company would make its own determination about how to achieve that goal. A HACCP plan for cooked roast beef may include steps such as checking the temperature of the oven, checking the cook time and even doing limited microbiological testing of the finished product to ensure that all Salmonella has been eliminated.

The seven HACCP principles include:

1. Identify hazards and assess the relative risk.
2. Identify critical control points in your process.
3. Establish critical limits or specifications to be met in order to control the potential hazard(s).
4. Establish monitoring procedures at each critical control point to make sure you are processing within the required critical limits.

5. Establish corrective action to be taken if the results of your monitoring show that you are operating outside the critical limits. This action is necessary to bring the processing step back in control.
6. Establish a record-keeping system to document monitoring of critical control points.
7. Establish verification procedures to periodically check to see that the HACCP system is working as planned.

Additionally, all slaughter and processing plants must conduct generic E. coli monitoring. The plan samples livestock and poultry for levels of generic E coli as an indication of fecal contamination. In the plan, the plant performs lab tests and keeps records. The FSIS monitors records. Additionally, FSIS samples carcasses and ground product for the presence of *Salmonella*. Failure to meet the standards set will require appropriate remedial action and repeated *Salmonella* problems could result in losing inspection privileges.

The Iowa HACCP coordinator and contact is

- **Iowa Department of Agriculture and Land Stewardship**
Michael Mammaing, Bureau Chief, Iowa Department of Agriculture and Land Stewardship, Wallace Building, Des Moines, IA 50319
Phone: (515) 281-5597
E-mail: mike.mammaing@idals.state.ia.us

Nebraska coordinators are:

- **REHS, Food Division**
George H. Hanson, Food Division Manager, REHS, Food Division, Bureau of Dairies and Food, PO Box 95064, Lincoln, NE 68509
Phone: (402) 471-2536
- **University of Nebraska**
Dr. Dennis Burson, University of Nebraska, A-213 Animal Science, PO Box 830908, Lincoln, NE 68583
Phone: (402) 472-6457
E-mail: ansc706@unlvh.uni.edu

Sanitary Operating Procedures (SOPs)

Each firm engaged in meat packing and processing must develop, implement and maintain written standard operating procedures for sanitation. Sanitation SOPs must describe all procedures, which will be conducted daily, before and during operations, to prevent direct contamination of products. The procedures at a minimum must address the cleaning of food contact surfaces of facilities, equipment and utensils. It must also identify how frequently the procedures will be conducted and identify the employees responsible for implementation and maintenance of the procedures.

Each establishment must maintain daily records sufficient to document the implementation and monitoring of the Sanitation SOPs and any corrective actions taken. These records must be maintained for six months and made available to FSIS at the establishment within 48 hours following completion.

FSIS is the agency that verifies the adequacy and effectiveness of the Sanitation SOPs, direct observation of the implementation of the Sanitation SOPs and the corrective

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actions taken, and direct observation or testing to assess the sanitary conditions of the establishment.

When an unsanitary condition is detected and rectified, the facility will be considered in compliance. Depending on the severity of the incident, inspectors can take action, including tagging the equipment or product and may recall suspect products if they have been distributed. USDA can temporarily suspend or terminate inspection for “persistent and serious” non-compliance.

Resource: Case Studies of Value Added Pork Production Marketing, National Pork Producers Council (NPPC).

■ Labeling Issues

Labeling, marking devices and containers are described under part 317 of Title 9, Chapter III of the Federal Register. “Marking” is defined as lettering or tags directly affixed onto products (e.g. marks of inspection.) “Label” broadly refers to product identification and includes marking.

The Federal Meat Inspection Act (FMIA) gives FSIS the authority for a label control program. Before a label can be used, it must be approved and must be used under inspection supervision. Regardless of who owns the establishment or where the establishment is located, all establishments under federal and/or state inspection must comply with the same requirements and standards for labels, establishing uniformity through the label control program.

An establishment may submit any label, marking or sketch directly to the Food Labeling Division of FSIS in Washington, D.C. For each label or sketch submitted, the establishment completes an FSIS Form 7234-1, Application for Approval of Labeling, Marking or Device, in duplicate and attaches the label, marking or sketch to each copy of the form.

The establishment has the responsibility to establish and maintain a record of all labeling that is used for meat and poultry products under their control. Labeling records must be made available to FSIS field personnel and any authorized USDA official upon request.

The following information is required on a label:

- Name of food – You must have a definition and standard of identity of which the consumer has knowledge.
- Ingredient statement (if needed) – If the product is composed of two or more ingredients, you must show the common or usual name of each in the descending order by weight at the time of product preparation.
- Inspection legend and establishment number.
- Net weight.
- Signature line – The name (address of manufacturer, packer or distributor).
- Handling statement (if needed) – A handling statement such as “keep refrigerated,” or “keep frozen,” etc., is required on the label of packaged product to indicate that the product must have handling to maintain its wholesome condition.
- Nutritional labeling (if needed) – The information includes the serving size, servings per container and the calories, fat, protein, carbohydrate and sodium per serving. Required for most further-processed products. It is voluntary for raw meat and poultry products, but producers are encouraged to supply nutritional labeling. Other

exempted products include small business (firms with fewer than 500 employees and producing fewer than 100,000 pounds per year); products intended for further processing; products not intended for sale; products in small packages (1.2 oz); custom slaughtered products; and products intended for export. However, the exemption is lost if a nutritional claim is made (e.g. "low fat") or if some nutrition information is voluntarily provided on the label. Commonly used terms signaling nutrient content claims are "free, less light, high, low, reduced, lean or good source of" (9 CFR 317.309 and 381.409)

- Low in fat — The product may contain no more than 3 grams of fat per reference amount customarily given or per 100 g for meal-type product with no more than 30 percent calories from fat.
- Reduced fat – The product contains at least 25 percent less fat than reference amount.
- Low in calories – The product may contain no more than 40 calories per serving.
- Lean (10 percent fat by weight) – The product contains less than 10 grams of fat, 4.5 grams or less of saturated fat and less than 95 milligrams of cholesterol per 100 grams.
- Extra lean (5 percent fat by weight) – The product contains less than 5 grams of fat, less than 2 grams of saturated fat and less than 95 milligrams of cholesterol per 100 grams.
- Ground beef may be labeled as "lean" or "extra lean" based on custom and usage without triggering nutrition facts.
- Lean claims should appear only on a low-fat food (3 grams of fat per serving).
- Sodium free or without sodium – Product contains less than 5 milligrams of sodium per serving and contains no ingredient that contributes sodium.
- No salt added, unsalted – No salt is added during processing, and the product it resembles is normally processed with salt. If the product is not sodium-free, a statement saying such must appear on the label.
- Nutrient content claims for cholesterol – To be low cholesterol, it may contain no more than 20 mg per serving and no more than 2 grams or less of saturated fat
- Safe handling instructions (if needed) – Required on all labels for products that are not processed to the point of being "ready to eat." This includes raw meat and poultry products. Safe handling instructions include a graphic display of pictures along with information on keeping foods refrigerated, keeping product contact surfaces clean, cooking thoroughly and keeping cooked foods hot. Other mandated handling statements include "to maintain safety/wholesomeness throughout the shelf life" or "refrigerated/frozen product" with "keep frozen" or "keep refrigerated."

Other labeling specifics include:

- Fresh should not be used on labels to designate a product that contains sodium or potassium nitrate or nitrite.
- Fresh may not be used for poultry previously frozen to 26 degrees F or below.
- Farm or country should not be used on labels in connection with products unless such products are actually prepared on the farm or in the country.
- Sausage containing cereal should not be labeled "farm style" or "country style."
- Irradiated – Products treated with ionizing radiation require that retail packaging or display include both the radura log (the international symbol that indicates radiation treatment) and a disclosure statement (either "treated with radiation" or "treated by irradiation").

- Packages for sliced bacon should have a transparent opening designed for viewing the cut surface of a representative slice.
- The term “natural” may be used when products contain no artificial ingredients and are no more than minimally processed.
- Raised without antibiotics/hormones – Approval for this relies upon testimonials and affidavits provided by producer.
- Organic – Products meet USDA organic standards. Applications for these labels are to be directed to the Labeling and Additives Policy Division, FSIS USDA, Room 616C Cotton Annex, Washington DC 20250.

Food additives in meat must be approved by the FDA and FSIS. FDA regulates listings for intended use. Written acknowledgment by the FDA that the substance used is generally recognized as safe (GRAS) or prior sanctioned is required, but USDA has the authority to make an independent evaluation of an additive with respect to use in meat and poultry. 9 CFR 318.7(a)(1) and 381.147(f)(1) list substances that are approved for use in meat, their general classification, their intended function and permitted use levels.

For more information on meat labels contact

- **American Meat Institute**
www.meatami.org
- **Office of Food Labeling**
*Center for Food Safety and Applied Nutrition, Food and Drug Administration,
200 C Street, S.W., Washington DC 20204
Phone: (202) 205-5229
www.fsis.usda.gov*
- **USDA Meat and Poultry Hotline**
Phone: (800) 535-4555

■ **Packaging**

Packaging choices influence the safety and quality of the food. For example, some food may be safer in vacuum-packed containers, while others may require freezing. There are federal and state laws regarding packaging.

Processors should contact the FDA office for information on packaging:

- **Center for Food Safety and Applied Nutrition**
*Center for Food Safety and Applied Nutrition, Food and Drug Administration, 200 C Street, S.W., Washington DC 20204
Phone: (202) 205-5229
www.cfsan.fda.gov*

■ **Uniform Commercial Code**

Certain retailers require a UPC code. For more information about the UPC system, contact:

- **Uniform Code Council, Inc.**
*Uniform Code Council, Inc., 1009 Lenox Drive, Suite 202, Lawrenceville, NJ 08648-2313
Phone: (609) 620-0200
www.uc-council.org*

■ Environmental Regulations

The Environmental Protection Agency (EPA) is charged with protecting human health and the natural environment. Unlike the FSIS, there are no specific regulations regarding the meat processing industry. However, the Clean Water Act (CWA) (1977 Clean Water Act Amendments to the 1972 Federal Water Pollution Control Act) requires that permits be obtained for wastewater discharged from industrial, commercial and certain agricultural sources. Operations that discharge directly to surface waters need a National Pollutant Discharge Elimination Systems (NPDES) permit. The permit identifies and limits the quantity and content of discharge, as well as establishing approved monitoring procedures.

Companies in Iowa should contact the Iowa Department of Natural Resources (DNR) to find out what specific permits might apply. Links to all state agencies can be found at the following Web sites: www.smallbiz-enviroweb.org or www.epa.gov. The National Food Processors Association (NFPA) offers direction in its publication, *Sourcebook of State Laws and Regulations for Food Processors*, which can be purchased at the Web site www.nfpa-food.org.

A processor also may contact the regional EPA office (Iowa-Region 7 in Kansas City, MO), which has small business and technical assistance programs. Below is a review from the NPPC *Case Studies of Value Added Pork Production Marketing*, which provides a summary of waste audit information for reducing emissions. Reducing waste can decrease operating disposal and liability costs of operating a plant.

Waste Reduction

Perform a Waste Audit

1. List wastes the plant generates (e.g. process wastewater, sludge, waste oils, dirty filters, empty containers).
2. Identify composition and source of waste.
3. Identify options to reduce waste. Priority should be given to the most hazardous materials and to the most easily achievable reductions.
4. Compare alternatives. Consider both economic and technological feasibility.
5. After implementation, schedule periodic evaluation of results.

Reduction Methods

Operating Procedures

1. Separate waste streams. Do not contaminate reusable or recyclable material.
2. Reduce waste of raw materials – reject damaged goods, monitor use and avoid overstock of perishables.
3. Use drip pans, screens and grease traps to capture solid residue.

Production Process

1. Use mechanical, dry cleanup whenever possible (e.g. sweep floor before hosing). This can reduce BOD5 by 50 percent or more.
2. Install high pressure, low volume water systems with automatic shutoff. Optimize use of the equipment to reduce cleaning needs.

Recycle and Reuse

1. Waste can be composted or land-spread.
2. Residues can be sent to the renderer or put into animal feed directly (depending on its nature).

Companies in Iowa should contact the Iowa Department of Natural Resources (DNR) to find out what specific permits might apply. Links to all state agencies can be found at the following Web sites: www.smallbiz-enviroweb.org or www.epa.gov.

3. Clean shipping materials, paper, etc., can be reused.
4. Recycle lubrication oils.

■ Packers and Stockyards Act (P&S)

The Packers and Stockyards Act is concerned with the fair practices in exchange of livestock. It was enacted in 1921 and provides payment protection by requiring prompt payment and bonding by packers.

P&S pursues an aggressive program to maintain standards of financial stability for those engaged in the marketing of livestock, meat and poultry. Specific requirements include:

- Commission firms, auction markets, dealers and packers must maintain a bond as a measure of protection. The size of the bond is based on the volume of business, but generally averages two days' business with a minimum of \$10,000 bond. Packers whose annual livestock purchases exceed \$500,000 are required to be bonded.
- Packers are required to pay promptly for livestock, usually by the close of business on the day after transfer of possession. For livestock sold on a grade-and-yield basis, it is the end of the next business day after the final purchase price is determined. Any credit agreement must be in writing, with prior approval from the seller.
- Cash sellers of livestock are legally in a priority payment position in bankruptcy or in claims against trust assets in the event of a business failure.
- Rules and regulations of P&S also cover unfair, deceptive and fraudulent practices. Those include such fraudulent practices such as weight or price manipulations, extortion, bait-and-switch advertising, unfair business-getting tactics (such as free trucking and commission rebates) and misrepresentation of quality, quantity or origin.

Exploring Patent and Trademark Needs

If you are beginning a business that is offering a new product or process or if you are processing a known product in a new way, you may be facing issues of obtaining patents and/or trademarks.

This is a complicated field, a specialty in the legal profession, and involves a massive government operation, the U.S. Patent and Trademark Office (PTO), as well. The process revolving around obtaining patents is lengthy and expensive. Rather than be intimidated, however, it is best to simply begin doing your homework – and the legwork required to get the ball rolling.

The PTO Web site is probably the best resource for you at almost any stage of the patent or trademark process. It has links to packages of information you need as well as to other resources and agencies that can be helpful. Use it whenever you have a question: www.uspto.gov

Some basic information may be of assistance to you. However, if you indeed need to obtain a patent or develop and register trademark, you should seek legal advice or begin patent searches (for similar products in existence) on your own or with the guidance of someone at a research library, your local library or a service-providing agency.

Patents

The Small Business Development Center (SBDC) offers explanations of two types of patents that might apply to your enterprise:

- Utility patents or general patents, which are obtained for a new process, machine, article of manufacture, composition of matter or any new and useful improvements thereof. The period of time covered by the patent is a maximum of 17 years.
- Design patents, which protect the appearance and design of an item rather than its function. This patent covers a maximum of 14 years.

Several characteristics must apply to the “item” for which you are seeking a patent. It must fall within the proper parameters for patents, pass a test of “novelty,” pass the test of “non-obviousness” and have utility.

There are laws covering a person’s (or employee’s) patent rights as well as those of companies. For these you need to consult an attorney or further pursue patent information on your own. You also have restrictions covering how much you publicly use or talk about (in print) an invention or if you sell it.

To fully benefit from your invention, you need to establish your rights in a legal manner. During the process of development and implementation/practice, you should clearly document your steps. Timeliness in progress on your ideas is also an important factor.

The patent search can be carried out by you, an attorney, a patent agent or another agency that performs that work. You might consider doing a preliminary search on your own. Public or university libraries that have collections of most patents issued are designated as Patent Deposit Libraries. You can save money by searching for yourself, but it is good advice to make an appointment with a reference librarian who can explain how to conduct your search.

For a fee, you can order copies of a patent or the patent numbers you find listed. For further information on this, contact the U.S. Patent and Trademark Office, Washington, DC 20231; or go to their Web site (given earlier) to order copies.

Trademarks

A company may register its trademark, which is a “word, name or symbol” used to identify a product and distinguish it from those being sold by other companies. For products sold within the state, a business can usually register through the Secretary of State's office. For outside of the state, trademarks can be registered through:

U.S. Department of Commerce
Patent and Trademark Office
Washington DC 20031

Again, the PTO Web site is your best resource for information.

Resources

www.sbaonline.sba.gov
www.iowabar.org
www.iowasbdc.org
www.business.gov

*Small Business Development
Center (SBDC)
137 Lynn, Ames, IA 50010;
(800) 373-SBDC*



Products or Services

Packaging

An example of considerations for contracting for packing and shipping follows.

It is reprinted with permission by UPS Professional Services.

General Packaging Considerations For Temperature Sensitive Products

Temperature sensitive products such as beef, pork, fish, and poultry, can be safely shipped to retailers and customers using a range of packaging solutions. The following questions should be considered to help you select the best packaging for your product(s).

- Temperature Range:** What is the safe temperature range for storing your product?
- Product Specifications:** How much does your product weigh? What are the dimensions of your product?
- Season:** Will you ship your products seasonally or throughout the year?
- Customer:** Will you have regularly scheduled shipments to the same customer, single shipments to many customers, or a combination of both?
- Time-in-Transit:** Where are your customers located?
What is the anticipated time-in-transit for shipping your product?
Does your product require to be shipped overnight with a guaranteed early morning delivery or can it travel for three-to-five days?

Once these variables have been determined, you can consider selecting an insulated container and refrigerant.

Insulated Containers:

Insulated containers reduce the transfer of heat (known as the R-value) through the walls of the distribution packaging. Common insulation materials include:

- Expanded Polystyrene (EPS)
- Rigid High Density Polyurethane
- Vacuum Insulation Panels
- Radiant Barrier Films

Note: Insulated materials should be a minimum of one-inch thick and fully surround your product.

Refrigerants:

Dry Ice (frozen Carbon Dioxide) and Gel Refrigerants are commonly used to keep temperature sensitive products cold or frozen while in transit. Use of wet ice (ice cubes) is not recommended due to numerous disadvantages including weight, thermal properties, and the necessity of expensive water-resistant packaging.

Dry Ice is available in both block and pellet form and has a surface temperature of -109°F (-78°C).

As dry ice sublimates (melts), it displaces oxygen. Special care must be taken in handling dry ice.

Special Hazardous Materials regulations may apply to shipping dry ice; always check with your carrier to ensure that your packages are in compliance.

Gel Refrigerants are available in block and wrap form.

Gel Refrigerants are frequently used to keep products between 30°F (-1°C) and 60°F (16°C).

General Packaging Considerations For Temperature Sensitive Products

Additional Considerations:

- All packages containing dry ice shipped via UPS must be clearly marked with the following information:
 1. The amount of dry ice inside the package. (Usually expressed in pounds or kilograms.)
 2. The product that is being refrigerated.
 - As of May 1, 2000 all packages shipped via UPS Air Services that contain five plus (5+) pounds of dry ice will require additional "Hazardous Materials" shipping papers. For the latest regulations on refrigerated packaging, please contact the UPS Hazardous Materials Support Center (800-554-9964).
 - Do not place the refrigerant at the bottom of the package because cold air will not circulate.
 - Fill the empty or "void" space in your package with appropriate packing materials or "dunnage" to prevent product movement in transit.
 - Wrap temperature sensitive products in two (2) watertight plastic bags or use absorbent material in conjunction with a plastic liner.
 - Do not ship temperature sensitive products over the weekend.
 - When using dry ice, wrap the refrigerant in paper or another carton to slow the sublimation (melting) rate. A carton would prevent excess empty or "void" space that will result from the sublimated dry ice.
 - When using dry ice, do not seal the inner insulated container. Venting is required to allow Carbon Dioxide gas to escape the package.
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Getting Help:

The packaging engineers at UPS Professional Services provide expertise on temperature-sensitive packaging and have a comprehensive understanding of the climatic conditions of the distribution environment.

For more information on packaging design and testing contact:



UPS Professional Services

A subsidiary of United Parcel Service

UPS Package Test Lab: (Toll free) 877-877-7229

E-mail: package_testing@ups-psi.com

Web Site: <http://www.ups-psi.com>

