**Introduction**

Are you considering producing edible oils for public consumption as a small-scale oilseed processor? If so, then this factsheet is a good place to start. The main focus of this factsheet is to present the regulations and requirements in terms of safety and sanitation for small-scale producers who would like to process edible oils from oilseed.

**Reasons for Cleanliness**

There are many reasons why the regulations currently in place are important. Since the oils produced are for general consumption, they need to meet the expectations of food production found in any food industry. Diseases and harmful materials, if not protected against, can contaminate the product and endanger the health of customers. As well as giving an operation a bad name in the industry, this can also cause a variety of legal problems which may end in fines or other legal consequences.

This factsheet details the different aspects of cleanliness in the workplace when it comes to the processing of edible oils, such as:

- Workplace surfaces
- Personal cleanliness
- Bottling and labeling
- Pest control
- Permitted construction materials

**Production Area Requirements**

When determining the best location for the production area, size is an important factor. The production area should be big enough to have plenty of space for the equipment and materials. It should also be spa-
Oilseed Fact Sheet: Processing Regulations

Cious enough to allow for ease of cleaning resulting in a sanitary operation. Equipment and material placement should be unobstructed and allow for safe movement around the area.

The floors, ceilings, and walls should be constructed of smooth surfaces which are easy to clean, and should be kept clean and in good condition. Any surfaces in contact with the product should be smooth as well, and resistant to decay from normal processing and cleaning procedures.

To prevent accidents involving glass objects, it is important to protect any and all glass objects such as windows, lighting, and bottles. Replace as many of these objects as possible with shatter-proof materials. This would include materials such as polycarbonate, lexan, or tempered glass.

It is important that fixtures in the production area also do not contaminate the product. This means installing fixtures such as lighting, ducts and pipes so that condensation doesn’t drip onto the product at any stage of its production. On the same note, lighting and ventilation should be adequate, keeping the workplace well lit with a good airflow.

**Employee Regulations**

When ensuring that the processing area meets sanitation standards, it is not just the facility that must meet standards. Anyone coming into contact with the product or the raw materials needs to maintain a level of cleanliness and protocol.

Personnel involved in the manufacturing of the product, or supervising its production, need to be properly trained to perform their tasks safely and with food safety practices in mind. Personnel involved in contact with the raw or finished product must follow certain regulations regarding clothing. These are:

- Personnel must remove jewelry

**Equipment and Handling**

The equipment in the processing area in contact with the product, such as processing, holding, transferring, and filling equipment should be designed for their intended purpose, and should be of the proper quality and materials to prevent corrosion. Preferred materials include PVC piping, polished stainless steel, and other food grade plastics. Materials not recommended are copper, brass, and galvanized metals.

The surfaces in contact with the product should be smooth, to prevent buildup and lubricants contaminating the product. They should also be free of dirt, and be accessible to cleaning. Cleaning and sanitation should be done on a regular basis.

An example of a hand washing sink with proper signs reminding workers to wash hands after contact with any contaminants.
before coming into contact with
the product, as jewelry can fall
into and contaminate it

- Clothing must be appropriate to
  maintain cleanliness and prevent
  contamination
- Hair nets must be worn on long
  hair and facial hair, to prevent it
  from falling into the product
- Torso hair must be appropriately
  covered—shirts must be buttoned
  or closed all the way

Lab coats are a preferable and sanitary
outer wear to consider when working
with the product, as they provide cov-
erage and prevent contamination.

Not only must personnel wear the ap-
propriate clothing, but they must also
maintain a level of personal hygiene
expected in a food processing environ-
ment. Personnel must properly wash
hands before each shift, after using
the restroom, and any time they come
into contact with contaminants.

Food, drink, and tobacco products
must be prohibited from the pro-
cessing area. No smoking is to be al-
lowed in the processing area, and
eating and drinking is to be done in
appropriate areas away from the
product and raw materials.

**Raw Material Handling**

The materials used in processing and
packaging of the product, such as the
oilseed and the bottles the product
will be stored in, must be stored pro-
perly prior to and after use. They
must be stored above the ground,
away from pests, excess moisture, and
contaminants. Contaminants include
microorganisms and chemicals, as well
as dirt and other unwanted materials.
They must also be properly labeled
and separated, to prevent mix-ups.

Bags and containers must be closed
when not in use, and kept away from
exposure to heat, cold, light and mois-
ture which might damage or decom-
pose them.

**Chemical Containment and
Regulations**

The facility used in processing of
oilseeds into food products may re-
quire a number of chemicals to aid in
production and sanitation. These in-
clude such materials as:

- Cleaning compounds
- Lubricants
- Pesticides
- Fuels
- Sanitizing compounds
- Other chemicals as needed

These materials are considered toxic
when working with food, and should
be stored separately from the pro-
cessing area. Their storage area
should be secure, and be labeled
properly. Chemicals inside this area
should be properly labeled and stored
safely, in their appropriate containers.
Any cleaning agents must be used as
their labels describe; only sanitizers
approved by the EPA are allowed for
use in the processing area, and must
be used according to their labels.

**Regulation Administration**

Regulations for food safety and pro-
cessing are found under Title 21 of the
Federal Code. A link to the code is
found in the references section of this
factsheet. These regulations are in
turn administered and supplemented
by state legislation, usually under the state department of agriculture.

To apply for a license to process oil for general consumption in Pennsylvania, use the link to the Pennsylvania Department of Agriculture (PDA) found in the references section.

**Summary**

The safety of food production is important, not just for meeting regulations, but for producing a quality product which sells well and brings customers back. When considering the facility in which the oil will be produced, many things matter, such as equipment, space, sanitation, and worker cleanliness. This factsheet reviews these important factors, so that the potential small-time food producer can set up a clean, safe, and functional workspace.

**Resources**

Penn State food science food entrepreneur site:

http://extension.psu.edu/food/entrepreneurs/starting-a-business

Penn State University Creamery Good Manufacturing Practices (to use as a reference):


PA Department of Agriculture licensing page (for applying to get a license):

http://www.agriculture.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_24476_10297_0_43/

http%3B/10.41.0.77/AgWebsite/ProgramDetail.aspx?name=Wholesale-Food-Processing-Manufacturing-and-Distribution&navid=12&parentnavid=0&palid=57

**US Drug and Food Administration Code of Federal Regulations Title 21:**


Vermont Department of Health Regulations for Food Service Establishments:

http://healthvermont.gov/regs/03food_estab.pdf

*Note: This is not a comprehensive list of resources on food processing regulations. For more information, contact your county sanitarian.*

Fact sheet prepared by:

Russell Schaufler, Farm Operations, Penn State College of Agricultural Sciences.

Douglas Schaufler, Dept. of Agricultural and Biological Engineering, Penn State College of Agricultural Sciences.

This project is supported by the Northeast Sustainable Agriculture Research and Education (SARE) program. SARE is a program of the National Institute of Food and Agriculture, U.S. Department of Agriculture

extension.psu.edu

Penn State College of Agricultural Sciences research and extension programs are funded in part by Pennsylvania counties, the Commonwealth of Pennsylvania, and the U.S. Department of Agriculture.

Where trade names appear, no discrimination is intended, and no endorsement by Penn State Cooperative Extension is implied.

This publication is available in alternative media on request.

The Pennsylvania State University is committed to the policy that all persons shall have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. It is the policy of the University to maintain an academic and work environment free of discrimination, including harassment. The Pennsylvania State University prohibits discrimination and harassment against any person because of age, ancestry, color, disability or handicap, genetic information, national origin, race, religious creed, sex, sexual orientation, gender identity, or veteran status and retaliation due to the reporting of discrimination or harassment. Discrimination, harassment, or retaliation against faculty, staff, or students will not be tolerated at The Pennsylvania State University. Direct all inquiries regarding the nondiscrimination policy to the Affirmative Action Director, The Pennsylvania State University, 328 Boucke Building, University Park, PA 16802-5901; Tel 814-863-0471.

© The Pennsylvania State University 2013