

Kev Xyuam Xim Rau Tej Tsjaj Tej Chiv Hiav Txwv

Aquaculture and Aquaponics Food Safety

KEV YUG NTSES THIAB UA QOOB LOO HAUV DEJ FARMING FISH AND CROPS IN SELECTED WATER ENVIRONMENTS

Hmong

Kev yug ub no hauv hav dej (aquaculture) yog kev tu thiab yug tej tsiaj tej nroj tsuag uas nyob hauv dej hauv ib thaj tsam lossis chaw twg.

Kev siv tej phuas hauv hav dej ua chiv (aquaponics) yog ib txoj kev siv tej quav los ntwam ntse lossis lwm hom tsiaj hauv dej hiav txwv los ua chiv yug nroj tsuag uas cog nyob hauv dej lossis xuas zeb (hydroponic). Qhov ua li no yuav pab lim cov dej.

Lub luag hauj lwm ntwam cov yug ntse

Cov yug ntse lossis yug ntse thiab qoob loo tibi muaj lub luag hauj lwm los tswj:

- Seb cov dej siv puas los ntwam cov dej zoo thiab tau kev pom zoo.
- Ua raws tej txheem lus cai, yog tias muaj feem.
- Yog tias muab tej khoom no coj mus muag, yuav tsum muab ntim kom zoo thiab muab ntawv lo rau pob khoom.
- Kev qhia tawm seb koj tau ntxuav thiab rhuav tshem cov cab nyob hauv tej nqaij hiav txwv li cas rau cov neeg yuav khoom.
- Qhov chaw muag khoom yuav tsum huv thiab tsuas tsis tau tej khoom noj.

English

Aquaculture is the general term used to describe the breeding and rearing of aquatic animals and plants in controlled or selected environments.

Aquaponics is a system of aquaculture in which the waste produced by farmed fish or other aquatic animals supplies nutrients for plants grown hydroponically, which in turn purify the water.

Responsibilities of the grower

Growers of fish or fish and crops together are responsible for maintaining:

- Approved water source.
- Compliance with processing requirements where applicable.
- Accurate and safe packaging and labeling if products are for final retail sale.
- Communications of parasite destruction practices to retail buyers.
- Sanitary conditions to ensure the physical environment does not cause contamination of food products.
- All appropriate licenses and permits.

- Muaj tej lais xees thiab ntawv tso cai uas tsim nyog raws li qhov lag luam.

Ntxiv thiab, yuav tsum ua tib zoo ua raws li tej txheem lus kov los sis txhom ntses muag yuav nyiaj kom nyab xeeb.

Tej lais xees thiab ntawv tso cai

Tej ntses, phiaj deg, thiab zaub cog tom teb yog muab piv xam tias yog tej khoom noj tom teb los sis tom vaj thiab tsis kom nws ua ntawv lais xees ua zaub mov los ntawm Minnesota Department of Agriculture (tuam tsev saib xyuas qoob loos). Tiamsis, nws kuj yuav kom nws ua daim lais xees yug cog tsiaj los sis nroj tsuag hiav txwv (aquaculture) los ntawm Minnesota Department of Natural Resources (tuam tsev saib xyuas tej khoom siv hauv ntiaj teb) thiab ua ntawv tso cai rau lawv tso dej los ntawm Minnesota Pollution Control Agency (koom haum tswj khoom qias).

Zaub

Txoj cai Produce Safety Rule ([21 CFR 112](#)) muaj feem rau tej zaub nyoos cog hauv dej los sis hiav txwv. Txoj cai ntawd muaj feem raws seb ib xyoos twg koj muag ho ntau thiab koj muag li cas. Daim [Standards for Produce Safety flowchart yuav](#) qhia txog tej ncej txheem uas ib lub lag luam yuav tsum muaj raws li ib daim "teb" yuav tsum ua raws txoj cai cog zaub.

Txoj Cai Ntsuas Qhov Teeb Meem Thiab Kev Nrhiav Seb Yam Twg Yog Yam Ua Mob Rau Tej Ntses (HACCP)

Additionally, best practices for food safety must be followed when handling fish and produce intended for commercial sale.

Licenses and permits

Farm raised fish, shellfish, and produce are considered products of the farm or garden and are excluded from food handler licensing by the Minnesota Department of Agriculture. However, a commercial aquaculture license may be required by the Minnesota Department of Natural Resources and a water discharge permit may be required from the Minnesota Pollution Control Agency.

Produce

The Produce Safety Rule ([21 CFR 112](#)) can apply to raw agricultural products grown through aquaponics. Applicability of the rule depends on sales per year and type of sales. The [Standards for Produce Safety flowchart](#) has the basic criteria that determine whether an operation that meets the definition of "farm" is subject to the produce rule.

Seafood Hazard Analysis Critical Control Points Rule (HACCP)

Seafood HACCP applies to producers and wholesalers. The Seafood HACCP Rule is a federal regulation ([21 CFR 123](#)) that applies to a fish farm operation if the processing

Cov txheem lus nyob hauv Seafood HACCP (txoj cai tswj tej ntsees tseev muag) muaj feem rau cov cog qoob loo thiab cov muag txo nqi (wholesale). Txheem lus Seafood HACCP Rule yog txoj cai los ntawm tsoom fwv([21 CFR 123](#)) uas muaj feem rau cov yug ntsees tom teb yog tias lawv tseev ntsees xws li muab taub hau txiav thiab rho tawm tej plab hnyuv, los sis muab ntsees ntim ua pob khoom, thiab muag tawm ntsees yam txo tus nqi kom muag tau ntau. Yog tias daim teb ntawd tsuas muab ntsees tso cov pa carbon dioxide, los sis cia nws los ntshav, muab ntsees ntxuav thiab tso rau dej khov, ces cov txheem lus hauv seafood HACCP tsis muaj feem rau nws.

Cov ntsees cia noj nyoos

Pub noj nyoos yog cov ntsees yug hauv hav dej uas:

- Yog cov ntsees yug hauv tej nkuaj ntsees hauv dej hiav txwv **los sis** ntawm tej thoob ntsees loj hauv tsev los sis tej paj des me.

THIAB

- Yog cov ntsees uas muab tej qhauv ntsees pub rau noj uas tsis muaj cab nyob rau hauv.

Kuj yuav tsum muab tej ntsees uas yug hauv hav dej ua kom khov yog tias siv tej thoob yas los yug lawv (live feed). Sij hawm qhia tsi ntsees txog yuav muab khov li cas nyob rau hauv [Cov Ntsees Cia Noj Nyoos](#).

includes the removal of heads and guts, or the packaging of fish, and the fish is sold wholesale. If the farm only treats with carbon dioxide, or bleeds, washes and ices the fish, seafood HACCP does not apply.

Fish intended for raw consumption

Aquacultured fish may be served raw if:

- Fish were raised in net-pens in open waters **OR** in land-based operations such as ponds and tanks.

AND

- Fish were fed formulated feed that did not contain live parasites.

Freezing requirements apply to aquacultured fish that are fed live feed. Specific freezing temperatures and times are available in the [Fish Intended for Raw Consumption](#) fact sheet.

Ntaub Ntawv Pab Ntxiv (Resources)

[Minnesota Department of Health Food Business Safety](#)

(<https://www.health.state.mn.us/communities/environment/food/index.html>)

[Minnesota Department of Health District office Locations](#)

(<https://www.health.state.mn.us/about/locations/dist.html>)

Fish Intended for Raw Consumption

(www.health.state.mn.us/communities/environment/food/docs/fs/fishrawfs.pdf)

Cov Ntse Cia Noj Nyoos

(www.health.state.mn.us/communities/environment/food/docs/fs/fishrawfsh.pdf)

Good Agricultural Practices (<https://extension.umn.edu/growing-safe-food/good-agricultural-practices-basics>)

Good Agricultural Practices (GAP) & Good Handling Practices (GHP)

(www.ams.usda.gov/services/auditing/gap-ghp)

Seafood HACCP Rule (21 CFR 123): Fish and Fishery Products

(www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?CFRPart=123)

Produce Safety Rule (21 CFR 112): Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption

(www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfCFR/CFRSearch.cfm?CFRPart=112)

Minnesota Department of Health
Food, Pools, and Lodging Services
PO Box 64975
St. Paul, MN 55164-0975
651-201-4500
health.foodlodging@state.mn.us
www.health.state.mn.us

Minnesota Department of Agriculture
Food and Feed Safety Division
625 Robert Street N
St. Paul, MN 55155-2538
651-201-6027 or 1-800-697-AGRI
MDA.FFSD.Info@state.mn.us
www.mda.state.mn.us

LUB 1 HLIS XYOO 2019

JANUARY 2019

*Xav tau cov ntaub ntawv no ua tus qauv txawv qhov
no, hu rau: 651-201-4500 or 651-201-6000.*

*To obtain this information in a different format, call:
651-201-4500 or 651-201-6000.*