

WEBVTT

00:00:10.226 --> 00:00:11.316
All right.

00:00:11.486 --> 00:00:16.737
Welcome everyone to the ready to
eat fermented salt cured and

00:00:16.737 --> 00:00:19.616
dried products guideline
webinar.

00:00:20.066 --> 00:00:23.470
This webinar is being recorded
and the recording will be

00:00:23.470 --> 00:00:26.336
available on the events page
after the meeting.

00:00:27.066 --> 00:00:31.004
Now I will turn it over to Paul
Kicker, administrator of the US

00:00:31.004 --> 00:00:34.942
Department of Agriculture's Food
Safety and Inspection Service,

00:00:34.942 --> 00:00:36.726
to give opening remarks well.

00:00:38.276 --> 00:00:38.986
Thank you.

00:00:39.196 --> 00:00:43.390
I'm Paul kicker, the FSIS
administrator, and I wanna thank

00:00:43.390 --> 00:00:47.655
you for joining us for our
webinar on the emphasis IS ready

00:00:47.655 --> 00:00:51.066

to eat fermented salt cured and dried products.

00:00:51.076 --> 00:00:56.000
Guideline this guideline issued on May 5th and announce in the

00:00:56.000 --> 00:01:00.142
Federal Register, provides information on the agency

00:01:00.142 --> 00:01:04.518
regulatory requirements associated with safe production

00:01:04.518 --> 00:01:09.363
of ready to eat, shelf stable fermented salt, cured and dried

00:01:09.363 --> 00:01:14.052
products that rely on multiple hurdle approaches to achieve

00:01:14.052 --> 00:01:16.396
lethality and shelf stability.

00:01:17.596 --> 00:01:21.479
We will be accepting comments on the guideline until July 5th of

00:01:21.479 --> 00:01:22.076
this year.

00:01:23.376 --> 00:01:27.254
It's designed to respond to commonly asked questions from

00:01:27.254 --> 00:01:30.663
small and very small establishments concerning the

00:01:30.663 --> 00:01:34.874
food safety hazards associated with these products and the key

00:01:34.874 --> 00:01:38.016
steps in each process needed to
ensure safety.

00:01:39.576 --> 00:01:44.081
It was developed in response to
an increasing interest in

00:01:44.081 --> 00:01:48.740
producing these artisanal niche
products and the challenges

00:01:48.740 --> 00:01:53.477
associated with them and the
problem with finding scientific

00:01:53.477 --> 00:01:58.448
support that demonstrates that
an establishments unique process

00:01:58.448 --> 00:02:03.185
achieves A5 log reduction in
salmonella recommendations made

00:02:03.185 --> 00:02:07.456
by the National Advisory
Committee on meat and Poultry

00:02:07.456 --> 00:02:11.106
Inspection also contributed to
the guidelines.

00:02:12.316 --> 00:02:17.201
Specifically, the link to the
niche meat processors assistance

00:02:17.201 --> 00:02:21.077
network and the Hasof
coordinator listing are two

00:02:21.077 --> 00:02:24.566
resources included in the
guidance document.

00:02:24.636 --> 00:02:29.120
Based on these recommendations,

Ephesians also included guidance

00:02:29.120 --> 00:02:33.258
on products such as those that
are solved, cured, where the

00:02:33.258 --> 00:02:37.466
initial validation period may
extend beyond 90 calendar days

00:02:37.466 --> 00:02:41.949
due to the nature of the process
and the length of time it takes

00:02:41.949 --> 00:02:45.674
to implement the critical
operational parameters that

00:02:45.674 --> 00:02:46.846
impact lethality.

00:02:48.486 --> 00:02:51.997
This guideline replaces and
expands upon information

00:02:51.997 --> 00:02:55.707
previously found in other
guidance documents addressing

00:02:55.707 --> 00:02:59.880
the safe production of ready to
eat fermented meat and poultry

00:02:59.880 --> 00:03:00.476
products.

00:03:02.066 --> 00:03:05.359
Ephesians is giving
establishments time to review

00:03:05.359 --> 00:03:06.676
the guideline there.

00:03:06.686 --> 00:03:11.125
Hazard analysis and scientific

support to determine if it is

00:03:11.125 --> 00:03:14.836
adequate, and I want to
emphasize that outreach is

00:03:14.836 --> 00:03:19.421
available to our small and very
small regulated establishments

00:03:19.421 --> 00:03:23.932
to assist in complying with this
guideline by contacting your

00:03:23.932 --> 00:03:25.096
district office.

00:03:26.346 --> 00:03:30.976
This webinar has been organized
for you in response to feedback

00:03:30.976 --> 00:03:31.916
and requests.

00:03:31.926 --> 00:03:36.493
For more information, please
feel free to ask any questions

00:03:36.493 --> 00:03:40.984
you have as we hope to make this
webinar as interactive as

00:03:40.984 --> 00:03:45.779
possible and please keep sending
us your feedback if you still

00:03:45.779 --> 00:03:49.889
have questions after
participating in this webinar or

00:03:49.889 --> 00:03:53.771
reading the guideline, we
recommend you search the

00:03:53.771 --> 00:03:58.110

publicly posted knowledge
articles called public Q&A

00:03:58.110 --> 00:03:59.936
in the ASK FIS database.

00:04:00.736 --> 00:04:02.706
You can also ask questions
through.

00:04:02.716 --> 00:04:05.666
Ask emphasis by selecting
Hassett.

00:04:05.676 --> 00:04:11.137
Deviation and hassop validation
as the inquiry type or you can

00:04:11.137 --> 00:04:16.598
ask your questions via telephone
1-800-233-3935 and now Doctor

00:04:16.598 --> 00:04:21.538
Merrill Silverman, the senior
food technologist with the

00:04:21.538 --> 00:04:26.305
Office of Policy and Program
Development, will walk us

00:04:26.305 --> 00:04:31.766
through the guideline and answer
any questions at the close of

00:04:31.766 --> 00:04:34.366
the Webinar, Doctor Silverman.

00:04:37.636 --> 00:04:38.686
Thank you, Paul.

00:04:38.956 --> 00:04:42.894
As Paul indicated today, I'm
going to be giving you an

00:04:42.894 --> 00:04:47.475

overview of ready to eat shelf
stable fermented salt, cured and

00:04:47.475 --> 00:04:50.696
dried products, and epistasis
new guideline.

00:04:53.276 --> 00:04:56.213
So I'm going to be giving some
background on outbreaks that

00:04:56.213 --> 00:04:59.199
have been associated with these
products and lessons learned

00:04:59.199 --> 00:05:00.226
from those outbreaks.

00:05:01.086 --> 00:05:04.700
I'm going to be covering FSS's
new guidance including

00:05:04.700 --> 00:05:09.050
recommended lethality and shelf
stability targets, and I'm gonna

00:05:09.050 --> 00:05:12.530
be talking about some unique
considerations for the

00:05:12.530 --> 00:05:16.479
validation of the lethality,
treatment for fermented cell,

00:05:16.479 --> 00:05:19.356
cured and dried meat and poultry
products.

00:05:19.366 --> 00:05:22.615
Products I am going to be
focusing on the lethality

00:05:22.615 --> 00:05:26.676
treatment because that is where
we see the most questions and is

00:05:26.676 --> 00:05:30.487
a big focus of the recently
issued ready to eat shelf stable

00:05:30.487 --> 00:05:33.736
fermented, soft cured and dried
product Skype line.

00:05:36.816 --> 00:05:40.641
So as Paul mentioned, there's
been an increasing interest for

00:05:40.641 --> 00:05:44.157
many years in producing
artisanal or niche shelf stable,

00:05:44.157 --> 00:05:47.981
ready to eat fermented salt,
cured and dried meat and poultry

00:05:47.981 --> 00:05:48.536
products.

00:05:49.536 --> 00:05:54.460
These multi hurdle products rely
on multiple hurdles other than

00:05:54.460 --> 00:05:58.844
cooking alone, such as salt
nitrite, reduced pH, reduced

00:05:58.844 --> 00:06:03.383
water activity and drying time
for lethality for red shelf

00:06:03.383 --> 00:06:07.460
stable meat and poultry
products, FSS recommends the

00:06:07.460 --> 00:06:12.306
process achieve at least A5 log
reduction in salmonella and at

00:06:12.306 --> 00:06:17.306
least A5 log reduction in sugar

toxin producing Escherichia coli

00:06:17.306 --> 00:06:20.306

or stack for products containing beef.

00:06:20.316 --> 00:06:23.586

To support that the product is ready to eat under the axe.

00:06:24.516 --> 00:06:29.037

Uh about how establishments may support an alternative lethality

00:06:29.037 --> 00:06:33.141

or reduction that provides an equivalent probability of no

00:06:33.141 --> 00:06:37.662

salmonella organisms present in the finished product, but it can

00:06:37.662 --> 00:06:41.140

be difficult to find support that demonstrates an

00:06:41.140 --> 00:06:45.035

establishments unique process achieves A5 log reduction

00:06:45.035 --> 00:06:46.426

because the hurdles.

00:06:46.436 --> 00:06:49.266

Again, that salt nitrate reduced pH.

00:06:49.276 --> 00:06:53.757

Reduce water activity and drying time are typically not as

00:06:53.757 --> 00:06:56.566

effective at cooking as cooking has.

00:06:56.576 --> 00:06:59.952
Establishments often also want
to modify the critical

00:06:59.952 --> 00:07:04.016
operational parameters from the
scientific support for their own

00:07:04.016 --> 00:07:07.516
unique process, which can create
additional challenges.

00:07:10.796 --> 00:07:15.104
And really lack of support that
the combination of hurdles were

00:07:15.104 --> 00:07:18.268
effective at achieving
significant significant

00:07:18.268 --> 00:07:22.172
reductions in salmonella was a
contributing factor in two

00:07:22.172 --> 00:07:24.326
salmonellosis outbreaks in 2021.

00:07:24.476 --> 00:07:28.876
That second over 70 people while
processing controls, including

00:07:28.876 --> 00:07:32.794
meeting degree hours parameters
for Staphylococcus orias

00:07:32.794 --> 00:07:36.574
control, following Amendment
number of drying days for

00:07:36.574 --> 00:07:40.836
trichinella elimination, and
achieving a final water activity

00:07:40.836 --> 00:07:44.685
level for shelf stability where

all met by the outbreak

00:07:44.685 --> 00:07:45.716
establishments.

00:07:46.146 --> 00:07:49.633
These controls were not
validated to achieve at least A5

00:07:49.633 --> 00:07:51.346
log reduction in salmonella.

00:07:52.596 --> 00:07:56.263
Another key finding from the
investigations was that small

00:07:56.263 --> 00:08:00.055
diameter products may require
longer drying times to achieve

00:08:00.055 --> 00:08:02.416
significant reductions in
salmonella.

00:08:03.476 --> 00:08:07.029
So while the establishment may
be drawing the product to the

00:08:07.029 --> 00:08:10.756
finished water activity needed
for shelf stability, it can take

00:08:10.756 --> 00:08:13.726
more drying days in order to
eliminate salmonella.

00:08:14.276 --> 00:08:18.061
Therefore, if an establishment
produces different diameter

00:08:18.061 --> 00:08:22.103
products, but only has a study
performed with one diameter, it

00:08:22.103 --> 00:08:25.887

must determine the impact of differences from the study to

00:08:25.887 --> 00:08:27.106
the actual process.

00:08:27.116 --> 00:08:30.783
And that's mainly going to be to drawing time to make sure the

00:08:30.783 --> 00:08:34.275
process is still effective in achieving the target pipeline

00:08:34.275 --> 00:08:35.846
reduction for all products.

00:08:39.986 --> 00:08:43.871
So in part, in response to these outbreaks, EVE SAS has issued

00:08:43.871 --> 00:08:47.571
guidance to establishments to ensure that they're aware the

00:08:47.571 --> 00:08:51.025
recommended targets for reduction or prevention of each

00:08:51.025 --> 00:08:51.456
hazard.

00:08:51.966 --> 00:08:55.816
The key steps in each process needed to ensure safety.

00:08:56.186 --> 00:08:59.956
The critical operational parameters associated with each

00:08:59.956 --> 00:09:04.123
step and the biological hazards associated with and scientific

00:09:04.123 --> 00:09:07.893

support available to help
produce common fermented salt,

00:09:07.893 --> 00:09:09.546
cured and dried products.

00:09:10.346 --> 00:09:10.776
I'm really.

00:09:10.786 --> 00:09:14.132
We learned from the 2021
outbreaks that establishments

00:09:14.132 --> 00:09:17.782
just weren't aware that the
controls they had in place were

00:09:17.782 --> 00:09:19.546
not validated for salmonella.

00:09:22.486 --> 00:09:27.480
So, per FSIS, notice 19-23, and
as Paul mentioned, FSS is giving

00:09:27.480 --> 00:09:30.936
establishments time to review
the guideline.

00:09:31.166 --> 00:09:35.187
Their hazard analysis and
scientific support to determine

00:09:35.187 --> 00:09:39.207
if it is adequate inspection
program personnel or IPP are

00:09:39.207 --> 00:09:43.575
instructed to find out if the
establishment needs more than 90

00:09:43.575 --> 00:09:45.446
days to gather new support.

00:09:45.846 --> 00:09:50.210
For example, if it's conducting

a challenge study or reviewing

00:09:50.210 --> 00:09:54.296
the scientific literature, and I
appeared to document this

00:09:54.296 --> 00:09:58.521
discussion in a memorandum of
interview or Moi after 90 days

00:09:58.521 --> 00:10:00.876
after the issuance of the
notice.

00:10:01.206 --> 00:10:05.358
If the establishment has
adequate scientific support, IP

00:10:05.358 --> 00:10:09.728
are to schedule a directed
hazard analysis, verification or

00:10:09.728 --> 00:10:10.456
have task.

00:10:10.966 --> 00:10:14.694
However, if the establishment
has communicated it needs

00:10:14.694 --> 00:10:18.421
additional time to gather
scientific support, IP are to

00:10:18.421 --> 00:10:22.614
wait until the support has been
gathered before performing the

00:10:22.614 --> 00:10:23.346
have tasks.

00:10:24.136 --> 00:10:27.799
The one exception would be that
Fsas will not wait to verify an

00:10:27.799 --> 00:10:31.346

establishment has scientific support for their hassop system.

00:10:31.736 --> 00:10:35.932
If it has a salmonella sugar toxin producing Escherichia coli

00:10:35.932 --> 00:10:39.924
or stack or LM positive, either through its own testing or

00:10:39.924 --> 00:10:43.714
emphasis testing, or are associated with an outbreak of

00:10:43.714 --> 00:10:44.796
these pathogens.

00:10:47.476 --> 00:10:52.369
Fsis, notice 19-23 also has instructions for enforcement

00:10:52.369 --> 00:10:54.686
investigation and analysis.

00:10:54.736 --> 00:10:58.920
Officers or E I/O if any IO performs a public health risk

00:10:58.920 --> 00:11:03.320
evaluation at an establishment producing ready to eat, shelf

00:11:03.320 --> 00:11:07.936
stable fermented salt, cured or dried meat or poultry products.

00:11:08.306 --> 00:11:11.464
They've been instructed to review the memorandum of

00:11:11.464 --> 00:11:14.986
interviews to see if the establishment has communicated a

00:11:14.986 --> 00:11:18.629
plan for gathering additional
support to inspection program

00:11:18.629 --> 00:11:19.236
personnel.

00:11:19.246 --> 00:11:21.646
So it's really important to have
that communication.

00:11:23.186 --> 00:11:26.887
If the establishment needs time
to gather scientific support,

00:11:26.887 --> 00:11:30.409
EIO are to wait until the
support has been gathered before

00:11:30.409 --> 00:11:32.736
performing the food safety
assessment.

00:11:32.746 --> 00:11:37.128
If it's recommended as part of
the Pre, again the exception

00:11:37.128 --> 00:11:41.363
though is the IO will not wait
to verify an establishment

00:11:41.363 --> 00:11:45.525
support if they've had a
salmonella stack or LM positive

00:11:45.525 --> 00:11:49.176
through their own testing or
through FSS testing.

00:11:49.466 --> 00:11:54.710
So FSF SSIS has a salmonella or
LM positive through its ready

00:11:54.710 --> 00:11:55.386
testing.

00:11:55.556 --> 00:11:59.455

Yeah, iOS will not wait to perform the public health risk

00:11:59.455 --> 00:12:03.622

evaluation and if needed, any intensified verification or IVT

00:12:03.622 --> 00:12:06.646

testing as part of a food safety assessment.

00:12:11.556 --> 00:12:15.935

As Paul mentioned, FSIS has also prepared outreach materials for

00:12:15.935 --> 00:12:20.313

E iOS to use, and these contain an overview of hazards, critical

00:12:20.313 --> 00:12:24.018

operational parameters and available support in two to

00:12:24.018 --> 00:12:24.826

three pages.

00:12:25.176 --> 00:12:29.027

And they come right from the guideline, which has overviews

00:12:29.027 --> 00:12:32.941

of fermentation, salt, curing and drying in the short 2 to 3

00:12:32.941 --> 00:12:33.326

pages.

00:12:33.976 --> 00:12:37.486

They're intended to be handed out or sent electronically, and

00:12:37.486 --> 00:12:41.165

if they're sent electronically, they contain links to all of the

00:12:41.165 --> 00:12:44.731
journal articles we're aware of
and have access to that can be

00:12:44.731 --> 00:12:45.636
used as support.

00:12:45.646 --> 00:12:50.299
So these articles are available
through Open Access or PDFs, and

00:12:50.299 --> 00:12:54.521
there are also available Asian
web page under resources if

00:12:54.521 --> 00:12:57.026
you'd like to request to
outreach.

00:12:57.036 --> 00:13:00.047
As Paul mentioned, that goes
through your district office and

00:13:00.047 --> 00:13:02.426
we've included the link here for
your reference.

00:13:05.516 --> 00:13:08.876
Before going into more details,
we always like to start with an

00:13:08.876 --> 00:13:11.606
overview of the product groups
we're talking about.

00:13:11.616 --> 00:13:15.398
So it's what we mean when we're
talking about products that are

00:13:15.398 --> 00:13:17.406
fermented, salt, cured and
dried.

00:13:18.016 --> 00:13:21.469

Products in each of these categories include those on the

00:13:21.469 --> 00:13:21.826
slide.

00:13:21.876 --> 00:13:26.708
So for men to products include those like Jenna was salami,

00:13:26.708 --> 00:13:29.526
hard salami, pepperoni sojac, etc.

00:13:30.156 --> 00:13:30.986
I'm so pure.

00:13:30.996 --> 00:13:35.788
Products include prosciutto, ham, country cured ham, basturma

00:13:35.788 --> 00:13:38.956
and bresaola, and then for dry products.

00:13:38.966 --> 00:13:43.595
These include products like dried beef, beef jerky drawers

00:13:43.595 --> 00:13:44.536
and biltong.

00:13:44.666 --> 00:13:47.804
Although products like beef jerky are not covered here

00:13:47.804 --> 00:13:51.398
because they're covered within our cooking guideline and jerky

00:13:51.398 --> 00:13:55.048
guideline, and those processes tend to rely on cooking as a way

00:13:55.048 --> 00:13:56.246

to achieve lethality.

00:13:59.356 --> 00:14:03.111
So I mentioned earlier that
there were two outbreaks in 2021

00:14:03.111 --> 00:14:05.326
associated with fermented
products.

00:14:05.676 --> 00:14:08.806
And this slide has an overview
of all of the outbreaks

00:14:08.806 --> 00:14:12.220
associated with these products
that have occurred in the US

00:14:12.220 --> 00:14:12.846
since 2010.

00:14:13.256 --> 00:14:17.084
This information can also be
found within the guideline and

00:14:17.084 --> 00:14:20.529
as you can see from the far
right column, last equate

00:14:20.529 --> 00:14:24.229
scientific support for A5 log
reduction, otherwise called

00:14:24.229 --> 00:14:27.674
under processing was a
contributing factor in most of

00:14:27.674 --> 00:14:31.118
these outbreaks, including the
two recent ones that I

00:14:31.118 --> 00:14:31.756
discussed.

00:14:32.466 --> 00:14:35.378

So again, that's why it's important establishments are

00:14:35.378 --> 00:14:38.607
aware of all the scientific support needed for the lethality

00:14:38.607 --> 00:14:39.136
treatment.

00:14:42.686 --> 00:14:46.762
And this slide shows you the various ways these processes get

00:14:46.762 --> 00:14:48.536
lethality or kill bacteria.

00:14:48.956 --> 00:14:52.712
Again, these products rely on multiple hurdles other than

00:14:52.712 --> 00:14:56.338
cooking alone, such as salt nitrite, reduced pH, reduce

00:14:56.338 --> 00:15:00.547
water activity, and drying time for lethality, and these hurdles

00:15:00.547 --> 00:15:04.368
again are typically not as effective as cooking at killing

00:15:04.368 --> 00:15:08.383
bacteria and the effectiveness of each hurdle also depends on

00:15:08.383 --> 00:15:11.944
the implementation of a number of critical operational

00:15:11.944 --> 00:15:12.656
parameters.

00:15:13.516 --> 00:15:13.706

I'm.

00:15:13.716 --> 00:15:17.089
I'm not going to go each of
these processes in detail today,

00:15:17.089 --> 00:15:20.406
but all the information here can
be found in the guideline.

00:15:23.836 --> 00:15:27.090
And so the first step to
ensuring the lethality treatment

00:15:27.090 --> 00:15:30.456
is effective is to ensure that
establishments, as required,

00:15:30.456 --> 00:15:33.766
consider the appropriate hazards
in their hazard analysis.

00:15:34.136 --> 00:15:38.025
And identify the appropriate
targets to ensure the hazards

00:15:38.025 --> 00:15:41.847
are prevented, reduced or
eliminated to acceptable levels

00:15:41.847 --> 00:15:45.933
and targets are the quantifiable
pathogen reduction levels or

00:15:45.933 --> 00:15:49.360
growth limits set by
establishments to produce safe

00:15:49.360 --> 00:15:53.051
products in the absence of
performance standards set by

00:15:53.051 --> 00:15:56.742
FSIS, targets are used by
establishments to demonstrate

00:15:56.742 --> 00:16:00.433
that the lethality and
stabilization processes achieved

00:16:00.433 --> 00:16:04.123
by the food safety system
prevent, eliminate, or reduce

00:16:04.123 --> 00:16:06.166
pathogens to acceptable levels.

00:16:07.326 --> 00:16:11.263
Unlike Appendix A, which has
tables for achieving a 6 1/2 or

00:16:11.263 --> 00:16:15.200
7 log reduction in salmonella
and meat and poultry products,

00:16:15.200 --> 00:16:19.137
it's not always clear looking at
an establishment scientific

00:16:19.137 --> 00:16:22.815
support scientific support, the
targeted reduction being

00:16:22.815 --> 00:16:23.396
achieved.

00:16:23.866 --> 00:16:27.212
So it's important establishments
clearly identify as part of

00:16:27.212 --> 00:16:29.406
their hassle, plan or other
supporting.

00:16:30.306 --> 00:16:31.256
And what?

00:16:31.266 --> 00:16:34.887
Their lethality target is again
that five log reduction or

00:16:34.887 --> 00:16:37.096
whatever the targeted reduction
is.

00:16:37.526 --> 00:16:40.226
And if they do not,
noncompliance may exist.

00:16:41.626 --> 00:16:45.556
So as we said, for ready to eat
shelf stable meat and poultry

00:16:45.556 --> 00:16:49.485
products, FSIS recommends the
process achieve at least A5 log

00:16:49.485 --> 00:16:53.478
reduction of salmonella and at
least A5 log reduction of stack

00:16:53.478 --> 00:16:55.316
for products containing beef.

00:16:55.326 --> 00:16:57.906
In order to support the products
are ready to eat.

00:17:00.316 --> 00:17:04.241
In addition to salmonella, the
valley treatment of ready to eat

00:17:04.241 --> 00:17:08.043
shelf stable meat and poultry
products should also achieve at

00:17:08.043 --> 00:17:11.416
least a three log reduction in
Listeria monocytogenes.

00:17:11.476 --> 00:17:14.960
Although A5 log reduction or
greater is desirable for

00:17:14.960 --> 00:17:18.895
providing an even greater safety

margin for ensuring that LM

00:17:18.895 --> 00:17:22.056
cannot grow to detectable levels
during storage.

00:17:23.746 --> 00:17:27.439
However, establishments are not
required to validate their

00:17:27.439 --> 00:17:31.319
process achieves the three log
reduction in at lab or even A5

00:17:31.319 --> 00:17:34.636
log reduction of stack for
products containing beef.

00:17:34.806 --> 00:17:38.839
If they have scientific support,
the process achieves significant

00:17:38.839 --> 00:17:40.366
reductions in salmonella.

00:17:41.776 --> 00:17:45.271
Also, just be aware there's lots
of combinations or ways

00:17:45.271 --> 00:17:47.846
establishments may support their
process.

00:17:48.296 --> 00:17:52.561
For an example, establishment
may have scientific support in

00:17:52.561 --> 00:17:57.104
which the process of this study
only included E coli O 15787 and

00:17:57.104 --> 00:18:00.879
that could be used as support
that there's sufficient

00:18:00.879 --> 00:18:03.116
reductions of salmonella and LM.

00:18:03.986 --> 00:18:07.737
These acceptable combinations of
support are all outlined in the

00:18:07.737 --> 00:18:10.622
guidance document, and we're
having those systems

00:18:10.622 --> 00:18:13.796
stablishment's in ask aphasias
if there are questions.

00:18:13.806 --> 00:18:14.216
Questions.

00:18:15.326 --> 00:18:19.158
I also want to add for ready to
eat shelf stable meat products

00:18:19.158 --> 00:18:20.556
produced from raw pork.

00:18:20.746 --> 00:18:24.495
The Hassop system must also
address to cut trick analysis

00:18:24.495 --> 00:18:27.857
paralysis, but we do want
everyone to be aware that

00:18:27.857 --> 00:18:30.959
scientific support for
reductions in salmonella

00:18:30.959 --> 00:18:34.967
salmonella lethality cannot be
used to support any particular

00:18:34.967 --> 00:18:37.746
reductions in trichina have been
achieved.

00:18:38.266 --> 00:18:41.870
And the same thing for
scientific support for Dracaena

00:18:41.870 --> 00:18:42.656
elimination.

00:18:42.666 --> 00:18:46.102
That cannot be used to support
any particular reductions in

00:18:46.102 --> 00:18:49.710
salmonella have been achieved
and that's because we just don't

00:18:49.710 --> 00:18:53.203
have any information suggesting
that there's any correlation

00:18:53.203 --> 00:18:54.806
between those two pathogens.

00:18:59.076 --> 00:19:03.346
Although I recommended target is
a 5 log reduction in salmonella.

00:19:03.396 --> 00:19:06.586
It can be difficult to find
scientific support that

00:19:06.586 --> 00:19:10.267
demonstrates at least A5 log
reduction again, because those

00:19:10.267 --> 00:19:13.456
hurdles are just not as
effective as cooking alone.

00:19:14.396 --> 00:19:18.110
Establishments may support an
alternative lethality or

00:19:18.110 --> 00:19:21.891
reduction that provides an
equivalent probability of no

00:19:21.891 --> 00:19:26.077
salmonella organisms present in
the finished product, and one

00:19:26.077 --> 00:19:30.061
common way establishments do
this is by following the Blue

00:19:30.061 --> 00:19:34.382
Ribbon task force option #5 in
which it's recommended that each

00:19:34.382 --> 00:19:38.501
and every lot of raw batter is
tested in combination with A2

00:19:38.501 --> 00:19:39.446
log reduction.

00:19:40.146 --> 00:19:44.992
The initial raw batter testing
option was to test each and

00:19:44.992 --> 00:19:49.839
every lot of raw batter for E
coli, O157H7 and combination

00:19:49.839 --> 00:19:53.206
with A2 log reduction in E coli
O 15787.

00:19:53.676 --> 00:19:57.115
But this process can also be
applied in which Arab first

00:19:57.115 --> 00:20:00.373
tested for salmonella in
combination with the two log

00:20:00.373 --> 00:20:00.976
reduction.

00:20:01.326 --> 00:20:04.145
Again, there's many ways this
can be applied, and these are

00:20:04.145 --> 00:20:05.836
all addressed within the
guideline.

00:20:06.966 --> 00:20:10.389
This type of testing though,
does provide less assurance of

00:20:10.389 --> 00:20:13.526
Product Safety, so it's
important that testing that is

00:20:13.526 --> 00:20:17.120
performed provides a high degree
of confidence that there's no

00:20:17.120 --> 00:20:18.146
pathogens present.

00:20:19.106 --> 00:20:22.988
Umm, I also want to mention that
we've adapted this concept for

00:20:22.988 --> 00:20:26.869
whole muscle type products like
biltong where the raw materials

00:20:26.869 --> 00:20:30.205
would be strips instead of raw
batter and so this this

00:20:30.205 --> 00:20:33.116
information can also be found in
the guideline.

00:20:34.356 --> 00:20:38.276
Finally, I just want to mention
that FSS does not consider

00:20:38.276 --> 00:20:42.262
testing hold also sometimes
described as option #3 from the

00:20:42.262 --> 00:20:45.916

Blue Ribbon Task Force document
as acceptable support.

00:20:46.656 --> 00:20:51.836
This option was developed before
Hassop was finished.

00:20:51.846 --> 00:20:55.610
Product testing alone is really
inconsistent with the hassop

00:20:55.610 --> 00:20:59.312
requirements because it does not
support any particular log

00:20:59.312 --> 00:21:02.952
reduction in levels of target
pathogens is achieved, so it

00:21:02.952 --> 00:21:06.407
does not support that the
establishment system provides

00:21:06.407 --> 00:21:08.196
any control over the process.

00:21:13.576 --> 00:21:17.433
So that's an overview of
Aphasias guidance related to

00:21:17.433 --> 00:21:20.646
lethality targets in terms of
stabilization.

00:21:20.656 --> 00:21:24.366
This is a little different than
what we're used to for cooked

00:21:24.366 --> 00:21:27.836
products because the products
are typically stabilized by

00:21:27.836 --> 00:21:31.246
reduced pH and reduce water
activity and not by cooling.

00:21:31.636 --> 00:21:35.310
Remember, stabilization is the
process of preventing or

00:21:35.310 --> 00:21:39.049
limiting the growth of spore
forming bacteria capable of

00:21:39.049 --> 00:21:43.378
producing toxins in the product,
like Clostridium botulinum or in

00:21:43.378 --> 00:21:45.936
the human intestine after
consumption.

00:21:46.146 --> 00:21:50.571
I clustered your preference, Ken
for quick products were used to

00:21:50.571 --> 00:21:54.316
rapid cooling being the primary
control for Clostridia

00:21:54.316 --> 00:21:54.996
outgrowth.

00:21:55.286 --> 00:21:59.661
But for for fermented software
and dry products, these controls

00:21:59.661 --> 00:22:03.557
can be more complicated for
fermented products, controls

00:22:03.557 --> 00:22:07.180
include salt concentration,
presence of lactic acid,

00:22:07.180 --> 00:22:11.076
bacteria use of dextrose and use
of nitrate and nitrite.

00:22:12.856 --> 00:22:16.964
Personal care products the

resting or equalization phase is

00:22:16.964 --> 00:22:21.413
a critical step for inhibiting C
botulinum and products like dry

00:22:21.413 --> 00:22:22.166
cured hams.

00:22:22.916 --> 00:22:26.702
If you've not considered these
hazards in the past, we have

00:22:26.702 --> 00:22:30.550
included the main articles that
we're aware of that support,

00:22:30.550 --> 00:22:32.506
yes, are these common controls.

00:22:33.036 --> 00:22:36.921
So we think you'll find the will
be really helpful for supporting

00:22:36.921 --> 00:22:39.216
decisions within your House up
system.

00:22:41.306 --> 00:22:44.853
Fsis also recommends that
establishments ensure the

00:22:44.853 --> 00:22:49.286
process allows no more than two
lux growth of staff orius during

00:22:49.286 --> 00:22:53.651
processing again, in order that
the product is ready to eat for

00:22:53.651 --> 00:22:57.606
fermented products, the amount
of time and hours above 60

00:22:57.606 --> 00:23:01.698

degrees it takes a specific temperature to reduce the pH to

00:23:01.698 --> 00:23:05.654
5.3 or below, known as degree hours, is typically used to

00:23:05.654 --> 00:23:08.586
ensure that staff areas growth is limited.

00:23:09.766 --> 00:23:14.051
Although the original scientific support that was used all of the

00:23:14.051 --> 00:23:18.011
degree hours does not include the amount of outgrowth that a

00:23:18.011 --> 00:23:22.231
meeting, the degree hours limits FSS has verified that achieving

00:23:22.231 --> 00:23:26.126
degree hours would limit staff areas growth to safe levels.

00:23:26.136 --> 00:23:30.616
And it's an acceptable control and support used for staff areas

00:23:30.616 --> 00:23:32.506
growth during fermentation.

00:23:36.556 --> 00:23:40.389
So the last type of pathogen, pathogen, target we would expect

00:23:40.389 --> 00:23:44.039
is related to shelf stability and fermentation, salt curing

00:23:44.039 --> 00:23:47.749
and drying typically render the product shelf stable at room

00:23:47.749 --> 00:23:51.460
temperature and shelf stability
as shown on the slide is the

00:23:51.460 --> 00:23:55.293
condition achieved for meat and
poultry products can be stored

00:23:55.293 --> 00:23:58.760
under ambient temperature and
humidity conditions if the

00:23:58.760 --> 00:24:02.471
package integrity is maintained
during storage, shipping and

00:24:02.471 --> 00:24:06.181
display at retail on the home
and the product will not spoil

00:24:06.181 --> 00:24:09.892
or become unsafe throughout the
manufacturer specified shelf

00:24:09.892 --> 00:24:10.196
life.

00:24:11.406 --> 00:24:15.541
Shelf stable product should have
characteristics that ensure no

00:24:15.541 --> 00:24:19.224
growth of staff organisms may
occur during storage of room

00:24:19.224 --> 00:24:23.489
temperature and appendix five of
the fermented salt cured and dry

00:24:23.489 --> 00:24:27.430
product skyline includes the
valuable scientific support for

00:24:27.430 --> 00:24:31.113
shelf stability for various

combinations of pH and water

00:24:31.113 --> 00:24:33.826
activity, either alone or in
combination.

00:24:35.206 --> 00:24:37.616
So I think you'll find that
information very helpful.

00:24:38.716 --> 00:24:41.566
Our measures should also be
taken to address mold growth.

00:24:44.256 --> 00:24:47.751
And we do get a lot of questions
about mold related to these

00:24:47.751 --> 00:24:48.266
products.

00:24:48.596 --> 00:24:52.890
Molds may grow unfermented soy
cured and dried products because

00:24:52.890 --> 00:24:56.379
the high salt and low
temperature conditions do not

00:24:56.379 --> 00:25:00.002
inhibit these organisms, and
here it's the sanitation

00:25:00.002 --> 00:25:00.606
standard.

00:25:00.616 --> 00:25:05.501
Operating procedures or SSO's is
critical to prevent undesirable

00:25:05.501 --> 00:25:09.935
mold growth, along with short
inventory dates, low pH, low

00:25:09.935 --> 00:25:14.068

water activity, antimycotic
coatings packaging such as

00:25:14.068 --> 00:25:18.276
vacuum packaging, or any
combination of these measures.

00:25:19.286 --> 00:25:22.860
If mold is present, depending on
the type, establishments may

00:25:22.860 --> 00:25:26.261
package the product with the
mold on or may scrub the mold

00:25:26.261 --> 00:25:29.719
off with a stiff vegetable brush
or may trim it to maintain

00:25:29.719 --> 00:25:30.526
wholesomeness.

00:25:31.856 --> 00:25:35.835
Have basis does not recommend
washing the mold off with hoses,

00:25:35.835 --> 00:25:39.813
including those that are high
pressure because that can result

00:25:39.813 --> 00:25:43.791
in cross contamination from the
environment to the product and

00:25:43.791 --> 00:25:47.075
is generally not recommended as
to prevent LM cross

00:25:47.075 --> 00:25:48.906
contamination post lethality.

00:25:50.756 --> 00:25:54.040
We also get questions about
whether the presence of mold

00:25:54.040 --> 00:25:57.726
requires specific labeling and
that does not other our labeling

00:25:57.726 --> 00:26:00.894
staff recommends that the
establishments label include

00:26:00.894 --> 00:26:04.120
instructions to consumers
regarding removal of the mold

00:26:04.120 --> 00:26:06.136
before consumption if
appropriate.

00:26:09.846 --> 00:26:13.759
Dry white mold, often seen on
fermented and dried sausages, is

00:26:13.759 --> 00:26:17.609
generally considered to be a
good mold because it can prevent

00:26:17.609 --> 00:26:19.596
so called bad mold from growing.

00:26:19.886 --> 00:26:23.552
But we do want to be clear that
color is not necessarily an

00:26:23.552 --> 00:26:24.896
indicator of bad mold.

00:26:24.946 --> 00:26:28.118
So we can't assume just based
off of the color of the mold

00:26:28.118 --> 00:26:29.246
that it's a bad mold.

00:26:30.276 --> 00:26:34.071
Sometimes a commercial mold
culture will be applied prior to

00:26:34.071 --> 00:26:37.431
fermentation, so either the
product will be dipped or

00:26:37.431 --> 00:26:41.475
sprayed with a active live mold
culture to prevent the growth of

00:26:41.475 --> 00:26:44.336
undesirable molds and for flavor
development.

00:26:45.946 --> 00:26:48.996
If a multi culture is not
applied and mold growth is

00:26:48.996 --> 00:26:52.505
desirable for quality reasons,
establishments should provide

00:26:52.505 --> 00:26:56.072
support for their process and
describe the controls they have

00:26:56.072 --> 00:26:59.409
in place over the critical
operational parameters such as

00:26:59.409 --> 00:27:02.458
relative humidity, air
temperature and air flow that

00:27:02.458 --> 00:27:05.795
result in mold production that
provides desirable quality

00:27:05.795 --> 00:27:07.406
attributes to their product.

00:27:11.166 --> 00:27:14.242
So those are the recommended
targets for lethality

00:27:14.242 --> 00:27:15.086
stabilization.

00:27:15.626 --> 00:27:18.670
Out shelf stability
establishments then must have

00:27:18.670 --> 00:27:22.201
scientific for Technical Support
that those lethality and

00:27:22.201 --> 00:27:25.306
stabilization and shelf
stability targets are met.

00:27:26.146 --> 00:27:30.274
Examples of scientific support
that may be used for fermented

00:27:30.274 --> 00:27:34.203
salt cured and dried products
include published processing

00:27:34.203 --> 00:27:38.131
guidelines, peer reviewed,
scientific or technical data or

00:27:38.131 --> 00:27:41.860
information, expert advice from
processing authorities,

00:27:41.860 --> 00:27:45.788
challenge or inoculated pack
studies, validate a pathogen,

00:27:45.788 --> 00:27:49.584
modeling programs and data
gathered by the establishment

00:27:49.584 --> 00:27:50.116
implant.

00:27:50.586 --> 00:27:53.558
I'm going to talk about each of
these types of support in

00:27:53.558 --> 00:27:53.916
detail.

00:27:54.346 --> 00:27:57.446
There are other types of
scientific support that I'll not

00:27:57.446 --> 00:28:00.545
talk about, such as regulatory
have performance standards

00:28:00.545 --> 00:28:04.019
because we don't have those for
these types of products and also

00:28:04.019 --> 00:28:07.119
best practice guidelines we're
not aware of best practice

00:28:07.119 --> 00:28:09.256
guidelines for these types of
products.

00:28:12.796 --> 00:28:16.163
So in terms of published
processing guidelines, FSS does

00:28:16.163 --> 00:28:19.531
not have any guidance that
includes critical operational

00:28:19.531 --> 00:28:22.898
parameters like we do for
cooking meth time, temperature

00:28:22.898 --> 00:28:24.906
and relative humidity
parameters.

00:28:25.356 --> 00:28:29.056
But we do have the new Ready
team, fermented salt cured and

00:28:29.056 --> 00:28:32.509
dry products guideline that
includes summaries of other

00:28:32.509 --> 00:28:36.208
types of support such as peer
reviewed articles that may be

00:28:36.208 --> 00:28:37.626
used by establishments.

00:28:38.156 --> 00:28:41.879
Establishments need the complete
scientific support document on

00:28:41.879 --> 00:28:44.496
file, so they need that old
journal article.

00:28:44.866 --> 00:28:49.218
I'm not just the guideline the
good manufacturing practices for

00:28:49.218 --> 00:28:52.890
fermented dry and semi dry
sausage is another type of

00:28:52.890 --> 00:28:55.746
published processing guideline
available.

00:28:56.156 --> 00:28:59.685
This supports the use of that
degree hours concept I was

00:28:59.685 --> 00:29:02.966
describing for controlling staff
orion growth during

00:29:02.966 --> 00:29:06.805
fermentation, but we do want you
to be aware that it does not

00:29:06.805 --> 00:29:10.395
support degree hours achieves
any particular lethality in

00:29:10.395 --> 00:29:11.076
salmonella.

00:29:12.876 --> 00:29:17.051

As I mentioned earlier, the FSI
is guideline for prevention and

00:29:17.051 --> 00:29:21.226

control of TRICHINELLA includes
critical operational parameters

00:29:21.226 --> 00:29:24.226

validated to destroy China in
these products.

00:29:24.496 --> 00:29:27.741

But it does not support any
particularly faulty of

00:29:27.741 --> 00:29:31.812

salmonella when those parameters
are followed and then aphasias

00:29:31.812 --> 00:29:35.502

is guideline for meat and
poultry jerky includes critical

00:29:35.502 --> 00:29:38.746

operational parameters validated
to prevent staph.

00:29:38.756 --> 00:29:40.866

Aureus outgrowth during storage.

00:29:40.876 --> 00:29:44.692

So to support the shelf
stability of dried products, but

00:29:44.692 --> 00:29:48.173

it does not support any
lethality of salmonella for

00:29:48.173 --> 00:29:51.586

uncooked fermented salt, cured
and dried products.

00:29:54.706 --> 00:29:57.968

So one common question we've

gotten and this comes right from

00:29:57.968 --> 00:30:01.124
the guideline is what if I meet
the degree hours and dry my

00:30:01.124 --> 00:30:04.385
product following one of the
methods in the guideline for the

00:30:04.385 --> 00:30:06.436
prevention and control of
trichinella.

00:30:06.806 --> 00:30:10.219
And I tried to a reduced water
activities such as water

00:30:10.219 --> 00:30:13.996
activity below .85 which can be
found in the jerky guideline.

00:30:14.346 --> 00:30:18.498
Isn't that enough to show
biological hazards are addressed

00:30:18.498 --> 00:30:19.976
and the answer is no.

00:30:20.276 --> 00:30:24.344
I this combination of controls
has not been validated to

00:30:24.344 --> 00:30:28.055
achieve any particular
reductions in salmonella and

00:30:28.055 --> 00:30:32.051
products have to often be
fermented to pH is lower than

00:30:32.051 --> 00:30:36.119
5.3 that critical limit or
critical parameter for degree

00:30:36.119 --> 00:30:39.973
hours and drive longer than is
needed to achieve self

00:30:39.973 --> 00:30:40.686
stability.

00:30:40.696 --> 00:30:44.904
That .85 water activity to get
significant reductions in

00:30:44.904 --> 00:30:45.716
salmonella.

00:30:50.986 --> 00:30:54.705
So really the most common type
of scientific support we see our

00:30:54.705 --> 00:30:58.134
peer reviewed scientific or
technical data or information,

00:30:58.134 --> 00:31:01.446
particularly for fermented salt,
cured and dry products.

00:31:02.546 --> 00:31:05.596
These articles can be used alone
and are available.

00:31:05.606 --> 00:31:08.782
I mentioned we have links to
many articles within the

00:31:08.782 --> 00:31:12.310
guideline, but what's most
important is that establishments

00:31:12.310 --> 00:31:16.014
do a careful comparison of the
critical operational parameters

00:31:16.014 --> 00:31:19.718
and we note sometimes they're
missing and those all need to be

00:31:19.718 --> 00:31:23.188
available in order to compare
and make sure the scientific

00:31:23.188 --> 00:31:26.186
support matches the
establishments actual process.

00:31:27.326 --> 00:31:31.336
Umm, so we do have links to all
of the number of articles that

00:31:31.336 --> 00:31:34.964
are available through Open
Access or where we've include

00:31:34.964 --> 00:31:38.974
the PDF versions of the articles
and so establishments can use

00:31:38.974 --> 00:31:42.793
the guideline to really help
identify what journal articles

00:31:42.793 --> 00:31:46.739
may match their process and then
they need to have that whole

00:31:46.739 --> 00:31:50.494
article on file and do this
careful comparison and we have

00:31:50.494 --> 00:31:53.931
an example here of where an
establishment is using an

00:31:53.931 --> 00:31:58.004
optional post fermentation low
temperature heat step to achieve

00:31:58.004 --> 00:31:59.786
lethality for their process.

00:32:00.056 --> 00:32:03.385
In this case, they're following

a journal article which

00:32:03.385 --> 00:32:06.535
validated the effectiveness of
achieving an internal

00:32:06.535 --> 00:32:09.626
temperature of 128 degrees
Fahrenheit for one hour.

00:32:10.126 --> 00:32:13.928
In this example, though, the
establishment wants to use a

00:32:13.928 --> 00:32:17.927
higher cooking temperature, and
in this case they're able to

00:32:17.927 --> 00:32:21.663
support that by referencing FSS
cooking guideline, which

00:32:21.663 --> 00:32:25.792
supports that using a same or
higher temperature with the same

00:32:25.792 --> 00:32:29.594
or longer dwell time is going to
be the same or even more

00:32:29.594 --> 00:32:31.626
effective at reducing bacteria.

00:32:34.136 --> 00:32:37.547
After modeling programs are
another type of support that can

00:32:37.547 --> 00:32:39.056
be used for fermented salt.

00:32:39.066 --> 00:32:40.566
Cured and dry products.

00:32:41.256 --> 00:32:45.278
But the is that these models

should not be used alone unless

00:32:45.278 --> 00:32:49.168
they've been validated and there
are a number of available

00:32:49.168 --> 00:32:52.266
validated models for these types
of processes.

00:32:52.536 --> 00:32:57.132
So the Danish Technological
Institute, or D MRI, has a

00:32:57.132 --> 00:33:00.056
confirm model available down
here.

00:33:00.276 --> 00:33:04.634
This model has been validated
for estimating the reductions of

00:33:04.634 --> 00:33:08.785
salmonella stack and LM and
fermented products up to A3 log

00:33:08.785 --> 00:33:09.476
reduction.

00:33:09.846 --> 00:33:13.892
So we noticed earlier that FSS
recommends at least a pie blog

00:33:13.892 --> 00:33:16.176
reduction in salmonella and
stack.

00:33:16.226 --> 00:33:20.043
So this type of model would be
limited to supporting a process

00:33:20.043 --> 00:33:23.618
like that raw batter testing I
mentioned in which each and

00:33:23.618 --> 00:33:27.132
every lot of raw batter is
tested in combination with the

00:33:27.132 --> 00:33:30.706
process validated to achieve at
least a two log reduction.

00:33:32.426 --> 00:33:36.274
The University of Wisconsin has
a shelf stability predictor

00:33:36.274 --> 00:33:40.251
available on their website, and
this model has been validated

00:33:40.251 --> 00:33:44.483
for estimating the likelihood of
staff orius and LM growth during

00:33:44.483 --> 00:33:44.996
storage.

00:33:45.086 --> 00:33:48.748
This is a great tool for
supporting shelf stability and

00:33:48.748 --> 00:33:52.540
then the DRI or Danish Meat
Research Institute also has a

00:33:52.540 --> 00:33:56.528
staff talks predictor model
that's been validated to predict

00:33:56.528 --> 00:34:00.647
the growth of staff orius and
potential toxin formation during

00:34:00.647 --> 00:34:04.047
mild heat treatment and during
constant temperature

00:34:04.047 --> 00:34:05.616
fermentation of sausage.

00:34:05.846 --> 00:34:09.041

So this model can be used to assist with fermentation

00:34:09.041 --> 00:34:11.526

deviations and evaluating Product Safety.

00:34:14.256 --> 00:34:17.759

There are other models that are also available, but you should

00:34:17.759 --> 00:34:21.094

be aware that they've not been validated and so the results

00:34:21.094 --> 00:34:22.706

cannot be relied upon a loan.

00:34:23.236 --> 00:34:27.618

One example is the agricultural Research Services pathogen

00:34:27.618 --> 00:34:30.366

modeling program for E coli O 15787.

00:34:30.376 --> 00:34:32.946

Survival for fermented sausage.

00:34:33.316 --> 00:34:36.803

This model has not been validated and also it only

00:34:36.803 --> 00:34:39.606

includes the input for one parameter pH.

00:34:39.616 --> 00:34:43.997

So it really simplifies all the various critical operational

00:34:43.997 --> 00:34:47.946

parameters that can impact effectiveness of lethality.

00:34:48.306 --> 00:34:51.869
But it's a great tool to give an
initial estimate for the

00:34:51.869 --> 00:34:55.492
effectiveness of a process,
which then must be followed up

00:34:55.492 --> 00:34:58.870
by other support, like a
challenge, study the meat and

00:34:58.870 --> 00:35:02.371
livestock model, E coli
inactivation model and fermented

00:35:02.371 --> 00:35:05.995
meat is another example of a
model that's great for giving

00:35:05.995 --> 00:35:07.346
that initial estimate.

00:35:07.616 --> 00:35:10.482
But since it hasn't been
validated, we need to be

00:35:10.482 --> 00:35:14.150
followed up by a challenge study
and could not be relied upon a

00:35:14.150 --> 00:35:14.436
loan.

00:35:19.376 --> 00:35:22.929
Establishments also often use
challenge studies to support

00:35:22.929 --> 00:35:26.603
their process because all the
unique combination of critical

00:35:26.603 --> 00:35:29.735
operational parameters which

cannot be found in the

00:35:29.735 --> 00:35:33.348
literature or other types of
support, and the well designed

00:35:33.348 --> 00:35:37.202
challenge study, should include
details about all the following

00:35:37.202 --> 00:35:40.093
on the slide the product
studied, including the

00:35:40.093 --> 00:35:43.706
formulation, types and number of
strains of microorganisms.

00:35:43.996 --> 00:35:47.797
And we do include within the
guideline various non pathogenic

00:35:47.797 --> 00:35:50.985
surrogates that can be
introduced in plant, because

00:35:50.985 --> 00:35:54.786
otherwise we would not want a
challenge study to be performed

00:35:54.786 --> 00:35:57.176
in a plant environment with
pathogens.

00:35:57.186 --> 00:35:59.912
We would not want to introduce
pathogens into the plant

00:35:59.912 --> 00:36:00.496
environment.

00:36:01.236 --> 00:36:04.078
Umm, there's other factors here
that should be included and

00:36:04.078 --> 00:36:06.636
they're all described in detail
within the guideline.

00:36:11.166 --> 00:36:14.641
Finally, data gathered implant
has particular value for

00:36:14.641 --> 00:36:17.246
fermented salt, cured and dried
products.

00:36:17.656 --> 00:36:21.602
Establishments are required to
gather implant validation data,

00:36:21.602 --> 00:36:24.796
demonstrating the hassop system
works as intended.

00:36:25.276 --> 00:36:28.193
The data must demonstrate the
effectiveness of the

00:36:28.193 --> 00:36:31.681
implementation of the critical
operational parameters and we

00:36:31.681 --> 00:36:34.712
recommend for at least one
product for each House of

00:36:34.712 --> 00:36:35.226
category.

00:36:35.756 --> 00:36:39.559
As you heard from Paul, the
guideline includes information

00:36:39.559 --> 00:36:43.749
about validation data, including
for products such as those that

00:36:43.749 --> 00:36:47.358
are salt cured, where the
initial validation period may

00:36:47.358 --> 00:36:49.356
extend beyond 90 calendar days.

00:36:49.746 --> 00:36:54.006
Due to the nature of the process
and the length of time it takes

00:36:54.006 --> 00:36:57.544
to implement the critical
operational parameters that

00:36:57.544 --> 00:37:00.886
impact lethality when
establishment has scientific

00:37:00.886 --> 00:37:05.146
support, such as a peer reviewed
journal article and it wants to

00:37:05.146 --> 00:37:08.684
use different critical
operational parameters and may

00:37:08.684 --> 00:37:12.878
consider also gathering implant
microbiological data to support

00:37:12.878 --> 00:37:16.941
the new combination of steps
achieves sufficiently lethality,

00:37:16.941 --> 00:37:20.479
particularly if data or
scientific principles are not

00:37:20.479 --> 00:37:22.576
available to support the change.

00:37:23.766 --> 00:37:24.696
Turn example.

00:37:24.706 --> 00:37:28.756
If an establishment is producing
a dried meat and it identifies a

00:37:28.756 --> 00:37:32.807
journal article that matches its
process, but it intends to use a

00:37:32.807 --> 00:37:35.997
slightly lower drying
temperature, say two or three

00:37:35.997 --> 00:37:40.048
degrees lower than what was used
in the support, it may choose to

00:37:40.048 --> 00:37:44.036
collect implant microbiological
data to support that difference.

00:37:44.046 --> 00:37:48.126
Is doesn't have a significant
impact in this case.

00:37:48.136 --> 00:37:52.480
The establishment would take a
statistically significant number

00:37:52.480 --> 00:37:56.756
of samples it produces during
those first 90 calendar days and

00:37:56.756 --> 00:38:01.099
do finished product testing for
pathogens like salmonella stack

00:38:01.099 --> 00:38:01.506
or LM.

00:38:02.866 --> 00:38:06.373
If the establishment produces
the product less than 13 days

00:38:06.373 --> 00:38:10.113
within a 90 calendar day period,
it should continue to test the

00:38:10.113 --> 00:38:13.560

product until 13 different lots
have been tested and found

00:38:13.560 --> 00:38:14.086
negative.

00:38:14.976 --> 00:38:18.549
It would not be appropriate,
though, to use this type of

00:38:18.549 --> 00:38:21.746
testing when there are big
differences between the

00:38:21.746 --> 00:38:25.005
establishments, scientific
support and their actual

00:38:25.005 --> 00:38:25.506
process.

00:38:25.776 --> 00:38:29.089
And again, that's because the
test and whole concept is really

00:38:29.089 --> 00:38:30.456
inconsistent with passive.

00:38:31.206 --> 00:38:35.023
Umm, what's considered a large
difference is going to depend on

00:38:35.023 --> 00:38:38.422
the parameter and the process,
but it would again not be

00:38:38.422 --> 00:38:42.178
appropriate to rely on implant
microbiological data if there's

00:38:42.178 --> 00:38:45.816
very large differences between
an establishments process and

00:38:45.816 --> 00:38:47.306

their scientific support.

00:38:47.606 --> 00:38:51.005
In that case, a challenge study
or other type of support may be

00:38:51.005 --> 00:38:51.376
needed.

00:38:54.766 --> 00:38:58.407
So I've been establishment is
using the scientific support as

00:38:58.407 --> 00:39:02.225
support for the development of a
critical control point and it's

00:39:02.225 --> 00:39:05.690
critical limits to prevent,
reduce or eliminate the hazard

00:39:05.690 --> 00:39:08.156
identified as reasonably likely
to occur.

00:39:08.566 --> 00:39:11.920
The establishment should
incorporate all of the critical

00:39:11.920 --> 00:39:15.803
operational parameters, from its
support into the critical limits

00:39:15.803 --> 00:39:18.686
of its CCP, and the
establishment may determine.

00:39:18.696 --> 00:39:21.957
However, based on its decision
making that some other

00:39:21.957 --> 00:39:25.641
parameters can be monitored on
an ongoing basis as part of a

00:39:25.641 --> 00:39:29.143
prerequisite program, an
establishment may also determine

00:39:29.143 --> 00:39:32.887
that it only needs to ensure
some of the critical operational

00:39:32.887 --> 00:39:36.269
parameters are implementing
consistent with the support

00:39:36.269 --> 00:39:39.046
during the initial implant
validation period.

00:39:39.056 --> 00:39:43.331
This could be something like the
formulation, but again, if for

00:39:43.331 --> 00:39:47.404
critical operational parameter
is implemented differently in

00:39:47.404 --> 00:39:51.812
the actual process than what was
used in this scientific support,

00:39:51.812 --> 00:39:55.619
the establishment must provide
justification for why the

00:39:55.619 --> 00:39:59.826
difference would still result in
an equally effective process.

00:40:00.896 --> 00:40:04.648
So that's why it's important to
do that careful comparison of

00:40:04.648 --> 00:40:07.977
the critical operational
parameters and the support to

00:40:07.977 --> 00:40:09.126
the actual process.

00:40:09.476 --> 00:40:12.744
And in order to do that, you
need to know what those critical

00:40:12.744 --> 00:40:14.166
operational parameters are.

00:40:14.436 --> 00:40:17.542
And so we have outlined within
the guideline the critical

00:40:17.542 --> 00:40:20.486
operational parameters for each
of the critical steps.

00:40:20.856 --> 00:40:24.417
So here we have them for
fermentation low temperature,

00:40:24.417 --> 00:40:25.776
heat step and drying.

00:40:26.896 --> 00:40:30.658
For fermentation, these
parameters include those like

00:40:30.658 --> 00:40:34.559
fermentation temperature,
target, pH, time to reach pH,

00:40:34.559 --> 00:40:35.186
etcetera.

00:40:35.596 --> 00:40:38.969
We also include the critical
operational parameters for a low

00:40:38.969 --> 00:40:40.166
temperature heat step.

00:40:40.356 --> 00:40:43.740
Establishments can also
absolutely cook fermented

00:40:43.740 --> 00:40:47.326
products using something like
FSS cooking guideline.

00:40:47.636 --> 00:40:51.785
That's not covered here because
cooking is well explained within

00:40:51.785 --> 00:40:54.976
epiphysis cooking guideline and
revised appendix.

00:40:55.056 --> 00:40:55.386
A.

00:40:55.696 --> 00:40:57.676
That's certainly an option here.

00:40:57.686 --> 00:41:01.284
We're focusing on the low
temperature heat step because

00:41:01.284 --> 00:41:04.947
that hasn't been covered and
other aphasias guidance for

00:41:04.947 --> 00:41:05.396
drying.

00:41:05.406 --> 00:41:08.875
There's critical operational
parameters like the drying room,

00:41:08.875 --> 00:41:12.232
temperature, drying time, target
water activity and product

00:41:12.232 --> 00:41:15.477
characteristics, and we also
note here there are critical

00:41:15.477 --> 00:41:18.666
operational parameters that do
not need to be addressed.

00:41:18.916 --> 00:41:19.586
So you heard.

00:41:19.596 --> 00:41:23.136
Paul talked about that National
Advisory committee for meat and

00:41:23.136 --> 00:41:24.186
poultry inspection.

00:41:24.476 --> 00:41:28.067
One thing they also recommended
Aphasias do was convene a group

00:41:28.067 --> 00:41:31.715
of researchers to give feedback
on these products, and they were

00:41:31.715 --> 00:41:35.194
able to give us really helpful
feedback, including that there

00:41:35.194 --> 00:41:38.672
are some critical operations,
grandmothers that are not gonna

00:41:38.672 --> 00:41:42.151
impact the effectiveness of the
lethality treatment for these

00:41:42.151 --> 00:41:42.656
products.

00:41:42.966 --> 00:41:46.781
So for fermentation, this
includes relative humidity and

00:41:46.781 --> 00:41:50.329
casing type for the low
temperature heat staff, this

00:41:50.329 --> 00:41:54.545
would be relative humidity and
for drying these include casing

00:41:54.545 --> 00:41:58.226
type presence of mold, relative
humidity and air flow.

00:41:58.436 --> 00:42:02.255
So what this means is that
establishments can support that

00:42:02.255 --> 00:42:06.138
differences in these parameters
are not going to impact the

00:42:06.138 --> 00:42:09.826
effectiveness of the process by
using aphasias guidance.

00:42:11.916 --> 00:42:15.844
There's also a number of
critical operational parameters

00:42:15.844 --> 00:42:19.427
for dry curing and salt
equalization, including the

00:42:19.427 --> 00:42:22.666
curing and equalization
temperature curing and

00:42:22.666 --> 00:42:25.766
equalization time, salt
coverage, et cetera.

00:42:25.776 --> 00:42:29.756
And these are all shown here and
the same critical operational

00:42:29.756 --> 00:42:33.735
parameters occur for drying the
drying room, temp drying time,

00:42:33.735 --> 00:42:36.956
target water activity and
product characteristics.

00:42:37.306 --> 00:42:40.785

And again, there are other
critical operational parameters

00:42:40.785 --> 00:42:44.322
that we've identified do not
need to be addressed and these

00:42:44.322 --> 00:42:47.800
include relative humidity and
air flow for drying and salt

00:42:47.800 --> 00:42:48.566
equalization.

00:42:48.576 --> 00:42:51.976
And again, the casing type,
presence of mold, relative

00:42:51.976 --> 00:42:53.336
humidity and air flow.

00:42:53.406 --> 00:42:56.930
Again, this is because these
parameters are not going to

00:42:56.930 --> 00:43:00.824
impact the effectiveness of the
salt curing, dry curing or dry

00:43:00.824 --> 00:43:01.256
curing.

00:43:01.266 --> 00:43:03.526
Salt equalization or drying
steps.

00:43:05.806 --> 00:43:09.695
And then last, we have dry
products like BILTONG and drier

00:43:09.695 --> 00:43:10.926
shown on the slide.

00:43:11.016 --> 00:43:14.397
And for these products, there's

typically the critical steps

00:43:14.397 --> 00:43:16.946
include a marination or
seasoning and drying.

00:43:17.296 --> 00:43:21.123
And for marination or seasoning,
the product formulation and

00:43:21.123 --> 00:43:25.076
antimicrobial application, like
the concentration, pH coverage

00:43:25.076 --> 00:43:29.091
and contact time are all going
to be critical again for drawing

00:43:29.091 --> 00:43:32.667
the drawing room, temperature,
drying time, target water

00:43:32.667 --> 00:43:35.930
activity and product
characteristics can all impact

00:43:35.930 --> 00:43:38.376
the effectiveness of that drying
step.

00:43:38.806 --> 00:43:42.645
But the casing type, presence of
mold, relative humidity and air

00:43:42.645 --> 00:43:46.247
flow are critical operational
parameters that do not need to

00:43:46.247 --> 00:43:49.376
be addressed, and that's
supported by the guideline.

00:43:52.636 --> 00:43:56.310
So finally, to summarize, a
contributing factor in several

00:43:56.310 --> 00:43:59.859
outbreaks associated with
fermented salt cured and dried

00:43:59.859 --> 00:44:03.595
products has been a lack of
support that the combination of

00:44:03.595 --> 00:44:06.646
hurdles used were effectively
faulty treatments.

00:44:07.236 --> 00:44:11.243
FSS has issued a guideline to
assist establishments and

00:44:11.243 --> 00:44:15.464
complying with the House of
Requirement did salt cured and

00:44:15.464 --> 00:44:19.899
dried meat and poultry products
enforcement investigation and

00:44:19.899 --> 00:44:24.192
analysis officers or EIO, have
access to outreach materials

00:44:24.192 --> 00:44:28.412
related to fermented cell cured
and dried meat and poultry

00:44:28.412 --> 00:44:29.056
products?

00:44:29.246 --> 00:44:32.619
And establishments can request
outreach assistance through

00:44:32.619 --> 00:44:33.876
their district office.

00:44:34.226 --> 00:44:38.071
The IO have also attended a
webinar as establishments are

00:44:38.071 --> 00:44:42.048
being given time to gather
scientific support if needed and

00:44:42.048 --> 00:44:45.893
I have been instructed to wait
until the support has been

00:44:45.893 --> 00:44:49.937
gathered for four performing a
food safety assessment during

00:44:49.937 --> 00:44:51.726
the food safety assessment.

00:44:51.736 --> 00:44:55.334
EIO will verify the
establishment has considered the

00:44:55.334 --> 00:44:58.932
appropriate hazards and its
hazard analysis, and has

00:44:58.932 --> 00:45:02.801
identified the appropriate
targets to ensure the hazards

00:45:02.801 --> 00:45:06.806
are prevented, reduced or
eliminated to acceptable levels.

00:45:07.456 --> 00:45:10.509
They'll also verify the
establishment has scientific

00:45:10.509 --> 00:45:14.081
support that is processed, can
meet the targets it identified

00:45:14.081 --> 00:45:17.595
and implemented the critical
operational parameters in their

00:45:17.595 --> 00:45:20.936

actual process, consistent with their scientific support.

00:45:24.186 --> 00:45:26.146
With that, we have time for questions.

00:45:26.156 --> 00:45:29.432
I want to thank you for your time and attention, and I do

00:45:29.432 --> 00:45:32.707
also want to mention, as you heard from Paul, that if you

00:45:32.707 --> 00:45:36.039
have any questions after this webinar, please submit those

00:45:36.039 --> 00:45:39.653
through, ask if it's IIS using the hasset validation and hassab

00:45:39.653 --> 00:45:40.556
deviation queue.

00:45:41.066 --> 00:45:44.450
You also heard that there are links in the guideline to the

00:45:44.450 --> 00:45:47.722
niche assistance meat processors network and the House of

00:45:47.722 --> 00:45:50.936
Coordinators who may also be able to provide assistance.

00:45:51.406 --> 00:45:54.548
But with that, I'm going to turn it over to Kimberly to share the

00:45:54.548 --> 00:45:55.166
instructions.

00:45:55.586 --> 00:45:57.126
Uh for asking a question.

00:45:59.376 --> 00:46:01.286
Alright, thank you, Doctor
Silverman.

00:46:01.856 --> 00:46:06.406
OK, there are a few ways to ask
a question or make a comment.

00:46:06.456 --> 00:46:10.279
So for those using the teams
app, you can press the raise

00:46:10.279 --> 00:46:14.366
your hand feature and we can
call on you and unmute your mic.

00:46:14.816 --> 00:46:16.806
You can also enter your
questionnaire.

00:46:16.816 --> 00:46:20.990
Comment in the chat box and for
those using your phone, you can

00:46:20.990 --> 00:46:24.968
press star 5 to raise your hand
and that will put you in the

00:46:24.968 --> 00:46:28.947
queue and we'll call you by
announcing the last four numbers

00:46:28.947 --> 00:46:30.316
of your phone number.

00:46:31.866 --> 00:46:32.516
Alright.

00:46:32.586 --> 00:46:36.197
And I see that someone has their
hand raised, so let me go ahead

00:46:36.197 --> 00:46:37.086
and unmute them.

00:46:48.786 --> 00:46:50.576
Alright, Karen, you're unmuted.

00:46:50.946 --> 00:46:51.286
Go ahead.

00:46:51.736 --> 00:46:53.286
Hi, thank you so much.

00:46:53.296 --> 00:46:59.000
Doctor Silverman, you mentioned
earlier in the presentation that

00:46:59.000 --> 00:47:04.440
as long as you are showing umm
the appropriate log reductions

00:47:04.440 --> 00:47:09.617
in salmonella that there is not
a requirement to also show

00:47:09.617 --> 00:47:12.776
reductions in listeria or in S
TEC.

00:47:12.866 --> 00:47:14.696
Can you tell me a little bit
more about that?

00:47:14.706 --> 00:47:20.096
I wasn't familiar with that not
needing to be shown.

00:47:21.706 --> 00:47:22.096
Yeah.

00:47:22.106 --> 00:47:26.204
So this is something that's been
in our validation guidance for a

00:47:26.204 --> 00:47:30.116
number of years, but also we get

into a lot more detail in the

00:47:30.116 --> 00:47:33.717
fermented sock here and drag
guidance just because of the

00:47:33.717 --> 00:47:36.076
combinations of support we have
seen.

00:47:36.486 --> 00:47:41.318
We do know that E coli and 15787
and LM can be more tolerant to

00:47:41.318 --> 00:47:45.698
acid and drying, but ultimately
establishments could have

00:47:45.698 --> 00:47:50.001
scientific support available
that just showed salmonella

00:47:50.001 --> 00:47:50.756
reduction.

00:47:50.766 --> 00:47:55.060
So what that means is that if
only salmonella was included in

00:47:55.060 --> 00:47:58.661
the study, it could be a
challenge study or journal

00:47:58.661 --> 00:48:03.232
article and stack such as E coli
on 5787 and LM were not included

00:48:03.232 --> 00:48:07.456
that study because stand alone
as a scientific support if it

00:48:07.456 --> 00:48:11.473
provided that five library
duction again the same is true

00:48:11.473 --> 00:48:13.896
if the scientific support just
in.

00:48:14.816 --> 00:48:19.299
E coli O157H7 in that blue
ribbon task force document from

00:48:19.299 --> 00:48:20.286
the late 90s.

00:48:20.296 --> 00:48:24.557
At the time, there were
outbreaks associated with E coli

00:48:24.557 --> 00:48:28.968
owned 5787, so those processes
were just validated to show

00:48:28.968 --> 00:48:30.986
reductions in E coli 15787.

00:48:31.236 --> 00:48:33.686
That would be acceptable, even
though it did not.

00:48:33.696 --> 00:48:37.206
Also include salmonella or LM.

00:48:37.416 --> 00:48:40.206
Of course, of an establishment
is doing a challenge study.

00:48:40.496 --> 00:48:44.388
We recommend all of those
pathogens, salmonella, stack and

00:48:44.388 --> 00:48:48.544
LM are included, but again, if
just one is included, there are

00:48:48.544 --> 00:48:51.446
various combinations of
acceptable support.

00:48:52.196 --> 00:48:53.776
Hopefully that answers the
question.

00:48:54.296 --> 00:48:55.626
Yeah, absolutely.

00:48:56.176 --> 00:48:59.513
Can you point me in the
direction of a particular FSS

00:48:59.513 --> 00:49:02.416
guidance that discusses that or
lays that out?

00:49:03.506 --> 00:49:03.896
Yeah.

00:49:03.906 --> 00:49:08.026
So that is all laid out within
this new fermented salt cured

00:49:08.026 --> 00:49:09.376
and dried guideline.

00:49:09.676 --> 00:49:10.096
Awesome.

00:49:09.826 --> 00:49:14.916
And so there's extensive
discussion about the targets.

00:49:14.966 --> 00:49:18.195
It's in a section about the
reduction targets and then it

00:49:18.195 --> 00:49:20.866
goes through all those
combinations of support.

00:49:21.066 --> 00:49:24.838
Generally, there's information
in the valid passive systems

00:49:24.838 --> 00:49:28.987

validation guidance, but there's just much more detail because it

00:49:28.987 --> 00:49:32.256
gets more complicated with these types of products.

00:49:32.266 --> 00:49:34.426
So that's covered all within this guideline.

00:49:35.956 --> 00:49:36.696
Thank you so much.

00:49:40.796 --> 00:49:41.516
All right.

00:49:44.156 --> 00:49:49.036
It looks like we have another hand, so let me unmute them.

00:49:51.526 --> 00:49:55.325
Alright Nathan, you are unmuted and you may have to unmute

00:49:55.325 --> 00:49:59.187
yourself and then you can go ahead and ask your question or

00:49:59.187 --> 00:50:00.346
make your comment.

00:50:09.866 --> 00:50:12.756
Nathan, you might be muted on your end.

00:50:12.816 --> 00:50:16.686
We can't hear you, but you have access to unmute yourself.

00:50:27.176 --> 00:50:27.926
Oh, I'm sorry.

00:50:29.166 --> 00:50:30.416
Yes, we can hear you.

00:50:30.476 --> 00:50:30.986
Thank you.

00:50:31.036 --> 00:50:31.286
Go ahead.

00:50:31.036 --> 00:50:34.155
Just following on from the
previous question, my

00:50:34.155 --> 00:50:37.974
recollection, I haven't from
these guidelines is that while

00:50:37.974 --> 00:50:41.984
they can address someone know
alone, without stecker listeria,

00:50:41.984 --> 00:50:45.803
if they were to get a positive
for Stecker listeria through

00:50:45.803 --> 00:50:49.813
their testing or testing, then
they would have to have support

00:50:49.813 --> 00:50:51.086
for those pathogens.

00:50:51.096 --> 00:50:51.686
Is that correct?

00:50:52.626 --> 00:50:53.016
Yeah.

00:50:53.076 --> 00:50:54.746
That's a good clarification.

00:50:54.756 --> 00:50:55.396
Thank you.

00:50:55.406 --> 00:51:00.931
So, yes, FSS tests ready to eat

products for both salmonella and

00:51:00.931 --> 00:51:01.186
LM.

00:51:01.326 --> 00:51:05.207
And so if there was a case where
the establishment scientific

00:51:05.207 --> 00:51:09.213
support only included salmonella
reductions and there was an LM

00:51:09.213 --> 00:51:13.156
positive, you know, unless the
establishment could show it was

00:51:13.156 --> 00:51:16.536
the contamination was the result
of postley validity.

00:51:17.216 --> 00:51:19.136
Umm cross contamination?

00:51:19.146 --> 00:51:22.558
Then we would verify the
establishment could then support

00:51:22.558 --> 00:51:26.029
sufficient reductions of LM or
achieved, and same with the

00:51:26.029 --> 00:51:29.206
establishment, had a positive
from their own testing.

00:51:29.216 --> 00:51:32.795
If they did that for E coli
colon 5787, or if there was a

00:51:32.795 --> 00:51:36.373
stack outbreak associated with
the product, then we would

00:51:36.373 --> 00:51:40.259

verify the establishment support
was effective for those other

00:51:40.259 --> 00:51:40.876
pathogens.

00:51:41.196 --> 00:51:45.092
But otherwise, on a routine
basis, the establishment can

00:51:45.092 --> 00:51:49.534
support their hassop system with
support that just addressed one

00:51:49.534 --> 00:51:50.696
of the pathogens.

00:51:50.926 --> 00:51:52.296
Thank you for that
clarification.

00:51:53.396 --> 00:51:53.816
Thank you.

00:51:59.946 --> 00:52:04.349
All right, before I kick it over
to Scott to address some of the

00:52:04.349 --> 00:52:08.684
questions in the chat box, just
as a reminder, if you'd like to

00:52:08.684 --> 00:52:12.951
make a verbal comment or ask a
question, you can use the raise

00:52:12.951 --> 00:52:17.286
your hand feature or if you're
on the phone, you can press star

00:52:17.286 --> 00:52:18.776
5 to get in the queue.

00:52:21.886 --> 00:52:22.336
All right.

00:52:22.346 --> 00:52:26.664
And with that, I'll kick it over
to Scott for the comment in the

00:52:26.664 --> 00:52:26.996
chat.

00:52:28.656 --> 00:52:29.156
Hi Meryl.

00:52:29.166 --> 00:52:31.236
We have a couple of questions in
the chat.

00:52:31.336 --> 00:52:34.866
The first is, can you please
define bad mold?

00:52:37.486 --> 00:52:37.836
Yeah.

00:52:37.846 --> 00:52:41.831
So typically when we're thinking
of bad mold or undesirable mold,

00:52:41.831 --> 00:52:42.616
I'll call it.

00:52:42.626 --> 00:52:46.915
It could be molds that produce
mycotoxins or other types of

00:52:46.915 --> 00:52:51.204
toxins, but again, we're we
don't want to assume by looking

00:52:51.204 --> 00:52:52.276
at the product.

00:52:52.906 --> 00:52:56.110
Strictly, there may have been
some thought that if the mold

00:52:56.110 --> 00:52:59.154
was brown or green, it's
automatically a bad mold and we

00:52:59.154 --> 00:53:01.076
don't consider that to be the
case.

00:53:01.286 --> 00:53:05.420
And really, the key is that
establishments that want to have

00:53:05.420 --> 00:53:09.216
mold growth occur in their
process other than when it's

00:53:09.216 --> 00:53:13.553
summer filled with a commercial
culture would be to ensure they

00:53:13.553 --> 00:53:17.552
have control over making sure
they have the desirable mold

00:53:17.552 --> 00:53:18.026
growth.

00:53:18.036 --> 00:53:21.839
And that would be just making
sure that they have control over

00:53:21.839 --> 00:53:24.676
the factors that impact mold
growth occurring.

00:53:27.306 --> 00:53:30.935
And the next question is in
terms of shelf stability, what

00:53:30.935 --> 00:53:33.826
temperature is considered
ambient temperature?

00:53:35.636 --> 00:53:39.535
So we're typically looking at
room temperature storage, so

00:53:39.535 --> 00:53:43.434
making sure the product can be
safe under room temperature

00:53:43.434 --> 00:53:45.416
storage, whatever that may be.

00:53:47.806 --> 00:53:49.666
So non refrigerated storage.

00:53:52.896 --> 00:53:56.318
The next question is, does the
guideline provide guidance when

00:53:56.318 --> 00:53:59.414
these products need to be
treated as ready to eat during

00:53:59.414 --> 00:54:00.446
the drying process?

00:54:00.806 --> 00:54:02.516
For example, with the salami
product.

00:54:03.986 --> 00:54:06.906
Yes, I think there's two aspects
to this question.

00:54:06.916 --> 00:54:10.596
The first is whether a product
needs to be ready to eat or not.

00:54:10.606 --> 00:54:14.131
I'm not sure if that's part of
the question, but we do talk

00:54:14.131 --> 00:54:17.597
about the intended use of these
products and how there are

00:54:17.597 --> 00:54:20.945
certain products like built on
where the intended use is

00:54:20.945 --> 00:54:22.296
typically ready to eat.

00:54:22.306 --> 00:54:25.655
We know from marketing and other
materials that these products

00:54:25.655 --> 00:54:27.196
are marketed as ready to eat.

00:54:27.546 --> 00:54:31.103
And so if an establishment is
trying to support a different

00:54:31.103 --> 00:54:34.304
intended use, then we're going
to really look at that

00:54:34.304 --> 00:54:38.038
scientific support and evidence
how the establishment is going

00:54:38.038 --> 00:54:41.476
to ensure the product is safely
prepared by the consumer.

00:54:41.486 --> 00:54:44.508
Again, when we know there's
marketing and the other

00:54:44.508 --> 00:54:47.878
information indicating it's
commonly consumed as ready to

00:54:47.878 --> 00:54:51.249
eat, I think another part of
this question maybe when the

00:54:51.249 --> 00:54:54.852
product is considered postley,
faulty, exposed and so that is

00:54:54.852 --> 00:54:56.246
something we do address.

00:54:56.256 --> 00:55:00.128
There's a whole section on Posey
power exposure within the

00:55:00.128 --> 00:55:04.196
guideline and how establishments
really need to consider when

00:55:04.196 --> 00:55:05.836
that five loggly quality.

00:55:06.196 --> 00:55:10.609
So this is over again because
it's those multiple hurdles or

00:55:10.609 --> 00:55:14.660
steps, the five log lethality
may not occur until after

00:55:14.660 --> 00:55:18.566
fermentation and a certain
number of days of drawing.

00:55:19.566 --> 00:55:23.280
And so it's important that
establishment knows when that

00:55:23.280 --> 00:55:27.189
five log occurs, when that
lethality is over, because after

00:55:27.189 --> 00:55:31.358
that, then we're entering into
the post, leave ALDI environment

00:55:31.358 --> 00:55:35.071
that can also be important for
identifying post equality

00:55:35.071 --> 00:55:39.045
treatments because there may be
cases where an establishment

00:55:39.045 --> 00:55:43.150

uses fermentation and drying to achieve its five log reduction

00:55:43.150 --> 00:55:47.319
and then adds on top of that a number and the additional number

00:55:47.319 --> 00:55:48.296
of drying days.

00:55:48.306 --> 00:55:51.306
Maybe storage under vacuum for an additional 30 days?

00:55:51.536 --> 00:55:55.524
As a post lethality treatment, so it's just so important that

00:55:55.524 --> 00:55:59.577
the hassab system and all the supporting documentation clearly

00:55:59.577 --> 00:56:03.501
identifies when that lethality ends, so that it's clear when

00:56:03.501 --> 00:56:07.618
that closely quality environment begins and it's important it's

00:56:07.618 --> 00:56:11.670
clear for the establishment for identifying their food contact

00:56:11.670 --> 00:56:15.530
surfaces for their sampling program, and then also for FSIS

00:56:15.530 --> 00:56:19.646
when we do any type of testing in the postlethwait environment.

00:56:19.656 --> 00:56:22.146
So yes, that's definitely covered within the guideline.

00:56:29.816 --> 00:56:32.096
I don't see any more questions
at this time.

00:56:36.976 --> 00:56:37.566
All right.

00:56:37.296 --> 00:56:37.576
OK.

00:56:37.576 --> 00:56:39.666
We'll do one last call.

00:56:39.676 --> 00:56:41.226
Ohh, looks like there's a hand
up.

00:56:41.236 --> 00:56:42.436
Let me unmute them.

00:56:46.356 --> 00:56:46.796
To work.

00:56:47.386 --> 00:56:48.466
All right, Dan, you're unmuted.

00:56:49.696 --> 00:56:50.176
Yeah.

00:56:50.396 --> 00:56:51.266
You, doctor Silverman?

00:56:51.276 --> 00:56:52.346
I had one question.

00:56:52.596 --> 00:56:53.376
We. Yeah.

00:56:53.516 --> 00:56:54.056
Can you hear me?

00:56:54.386 --> 00:56:54.746
Yeah.

00:56:54.676 --> 00:56:54.816
Yes.

00:56:55.406 --> 00:56:56.006
OK.

00:56:56.386 --> 00:57:00.220
I had one question a we we here
at this facility, we run a

00:57:00.220 --> 00:57:03.533
pretty standard salami
manufacturing process which

00:57:03.533 --> 00:57:07.562
includes lactic acid bacteria,
salt and nitrate, nitrites and

00:57:07.562 --> 00:57:08.146
nitrates.

00:57:09.236 --> 00:57:13.043
We're having a difficult time
finding support for

00:57:13.043 --> 00:57:17.536
stabilization of Clostridium
perfringens umm from the time

00:57:17.536 --> 00:57:22.180
that we stuffed the product to,
I guess, uh when we have the

00:57:22.180 --> 00:57:26.901
acceptable pH drop the I think
we do have support for when it

00:57:26.901 --> 00:57:29.946
drops to a certain pH for no
outgrowth.

00:57:30.476 --> 00:57:34.213
Is there anything that the
agency had that could validate

00:57:34.213 --> 00:57:35.566
that time in between?

00:57:36.626 --> 00:57:38.766
It seems like that's our only
gap at the moment.

00:57:38.776 --> 00:57:39.526
The whole big thing.

00:57:39.846 --> 00:57:43.555
Yeah, I would recommend looking
at the section within the

00:57:43.555 --> 00:57:46.496
guidance about *C perfringens* and
C botulinum.

00:57:46.506 --> 00:57:50.075
So we definitely reference some
research which shows those

00:57:50.075 --> 00:57:53.886
standard controls you mentioned
lactic acid bacteria, presence

00:57:53.886 --> 00:57:55.156
of dextrose, nitrite.

00:57:55.386 --> 00:57:59.236
Those are going to control
posterity, outgrowth.

00:57:59.626 --> 00:58:01.526
How long was Saul throughout the
process?

00:58:01.536 --> 00:58:04.158
So please take a look at that
section and then if you still

00:58:01.996 --> 00:58:03.016
Then run into the.

00:58:04.158 --> 00:58:06.736
have questions, that'd be a
great question to put through.

00:58:05.046 --> 00:58:07.656
Yeah, I want another job like
it.

00:58:06.746 --> 00:58:11.483
Ask if asias and we can help see
where there might be gaps or or

00:58:11.483 --> 00:58:12.576
more questions.

00:58:13.276 --> 00:58:13.586
OK.

00:58:13.596 --> 00:58:13.906
Thank you.

00:58:13.936 --> 00:58:14.576
Both so much.

00:58:14.936 --> 00:58:15.396
Thank you.

00:58:19.976 --> 00:58:21.826
Merrill, a few more questions
came in.

00:58:21.916 --> 00:58:25.809
Did the chat one is the notice
states that establishments can

00:58:25.809 --> 00:58:27.566
request more time if needed.

00:58:27.816 --> 00:58:30.572
Is there any direction on how
much more time establishments

00:58:30.572 --> 00:58:31.306
will be allowed?

00:58:33.086 --> 00:58:33.656
Ah, no.

00:58:33.666 --> 00:58:37.463
So that's, we've really laughed
it up to the establishment to

00:58:37.463 --> 00:58:40.954
discuss that with their
inspection program personnel and

00:58:40.954 --> 00:58:44.751
their supervisory chain, because
we just know each process is

00:58:44.751 --> 00:58:48.609
gonna be different, sometimes
doing a challenge study if we're

00:58:48.609 --> 00:58:52.467
process takes several months to
complete is going to take, you

00:58:52.467 --> 00:58:54.916
know, several months plus the
planning.

00:58:54.926 --> 00:58:58.402
And so we want to be able to
allow for those individual

00:58:58.402 --> 00:58:59.146
differences.

00:59:00.706 --> 00:59:03.714
That may occur in each process,
so we didn't want to give a

00:59:03.714 --> 00:59:04.716
specific time frame.

00:59:04.946 --> 00:59:08.316
So really, as the notice states
that something to discuss with

00:59:08.316 --> 00:59:11.740
the inspection program personnel
and that can be then discussed

00:59:11.740 --> 00:59:13.826
further through the supervisory
chain.

00:59:16.816 --> 00:59:19.758
Then another question is in the
new guidance, there were

00:59:19.758 --> 00:59:23.009
labeling considerations for not
ready to eat products like dry

00:59:23.009 --> 00:59:23.576
cured hams.

00:59:24.236 --> 00:59:27.829
It mentions including wording
like soak in water to validated

00:59:27.829 --> 00:59:29.046
cooking instructions.

00:59:29.316 --> 00:59:32.426
Is this wording edition a
requirement or recommendation?

00:59:34.366 --> 00:59:34.686
Yeah.

00:59:34.696 --> 00:59:37.204
So it's not a requirement, but
it's something for

00:59:37.204 --> 00:59:37.956
establishments.

00:59:37.966 --> 00:59:41.556
Consider if there's a product
like dry cured ham.

00:59:41.706 --> 00:59:45.602
The product is not ready to eat
and the establishment is relying

00:59:45.602 --> 00:59:48.899
on consumer cooking as part of
their support for their

00:59:48.899 --> 00:59:50.936
decisions in the hazard
analysis.

00:59:51.226 --> 00:59:55.037
And they're including a cooking
temperature, for example on the

00:59:55.037 --> 00:59:58.788
label, and they're taking that
from something like FSS cooking

00:59:58.788 --> 01:00:02.361
guideline, which was really
developed for products that are

01:00:02.361 --> 01:00:04.266
moist cooked that are not dried.

01:00:04.636 --> 01:00:08.138
Umm, that would be something to
consider, including to make sure

01:00:08.138 --> 01:00:10.616
that that cooking step is
effective and drag.

01:00:10.626 --> 01:00:14.463
Your chances are great example
where that cooking will be

01:00:14.463 --> 01:00:18.630
effective because those products
are typically rehydrated upon

01:00:18.630 --> 01:00:22.798
cooking and so we do often see

instructions like soak in water

01:00:22.798 --> 01:00:27.031
that would ensure that product
is rehydrated and the cooking is

01:00:27.031 --> 01:00:28.486
going to be effective.

01:00:28.816 --> 01:00:30.246
But no, it's not required.

01:00:30.256 --> 01:00:33.965
It's going to depend on each
establishments decision making

01:00:33.965 --> 01:00:37.180
and their support for their
decisions in the hazard

01:00:37.180 --> 01:00:37.736
analysis.

01:00:37.806 --> 01:00:38.096
Yes.

01:00:45.416 --> 01:00:47.196
That's all that's in the chat at
this moment.

01:00:48.576 --> 01:00:49.616
So one more just came in.

01:00:49.666 --> 01:00:52.972
Does this guidance apply to
dried products such as beef

01:00:52.972 --> 01:00:53.326
jerky?

01:00:54.936 --> 01:00:55.346
No.

01:00:55.356 --> 01:00:59.051

So Aksis has a separate guideline for jerky,

01:00:59.051 --> 01:01:03.566
particularly, and that's gonna cover the use of cause.

01:01:03.576 --> 01:01:07.234
Typically, jerky is cooked along with dry that this guidance that

01:01:07.234 --> 01:01:10.616
we're talking about today is really focused on products that

01:01:10.616 --> 01:01:12.666
are not cooked to achieve lethality.

01:01:12.676 --> 01:01:16.394
They may have a low temperature heat step, but they're not using

01:01:16.394 --> 01:01:19.196
a cooking process like an FIS guidance appendix.

01:01:19.206 --> 01:01:23.575
A S officials has separate jerky guideline that covers all the

01:01:23.575 --> 01:01:27.596
unique considerations with jerky, including how to apply.

01:01:27.786 --> 01:01:30.856
FYI, this cooking guideline to jerky products.

01:01:40.376 --> 01:01:41.346
All right.

01:01:41.406 --> 01:01:46.429
So one last call them, you can use the raise your hand feature

01:01:46.429 --> 01:01:50.336
and for those on the phone you
can press star 5.

01:01:58.906 --> 01:01:59.356
All right.

01:01:59.366 --> 01:02:01.196
Doctor Silverman, I don't see
anything else.

01:02:01.206 --> 01:02:02.836
So I will turn it over to you
for closing.

01:02:04.626 --> 01:02:04.926
Great.

01:02:04.936 --> 01:02:07.533
Well, with that, we want to
thank you for your time and

01:02:07.533 --> 01:02:09.156
attention and excellent
questions.

01:02:09.166 --> 01:02:13.176
Again, if you have questions
after the webinar, please follow

01:02:13.176 --> 01:02:16.992
up and ask if asias using the
hassle validation and hassop

01:02:16.992 --> 01:02:18.026
deviation queue.

01:02:18.286 --> 01:02:20.756
And with that, this concludes
today's webinar.

01:02:20.826 --> 01:02:21.306
Thank

you. 

