|  |  |
| --- | --- |
| Logo AGES | |
| Deformed Wing Virus | |
|  |  |
| 14.03.2025 13:46 Uhr | |

**Deformed
Wing
Virus**

**DWV**

Last
change:
07.10.2024

**Profile**

The
deformed
wing
virus
(DWV)
affects
the
brood
and
adult
bees.
The
Varroa
mite
plays
a
crucial
role
in
the
transmission
and
reproduction
of
this
virus,
which
is
why
the
level
of
Varroa
infestation
in
a
colony
is
decisive
for
the
DWV
load.

**Occurrence**

On
all
continents
where
the
western
honey
bee
occurs.
It
is
very
common
in
Austria.

**Pathogen
reservoir**

Bee
colonies
with
infected
brood
and
infected
bees,
infected
Varroa
mites

**Route
of
infection**

By
far
the
most
important
transmission
route
is
via
the
Varroa
mite:
it
bites
a
hole
in
the
outer
shell
of
the
adult
bee
or
the
bee
pupa,
feeds
on
the
fat
body
and
transmits
the
virus
in
the
process.
The
virus
can
also
be
transmitted
via
food,
sperm
(infection
of
the
queen
during
mating)
and
the
queen
(infection
of
the
eggs
during
egg-laying).
Transmission
from
colony
to
colony
occurs
naturally
through
the
movement
of
bees.
Transmission
is
also
possible
through
beekeeping
work
when
bees
or
bee
brood
are
transferred
to
other
colonies.

**Symptomatology**

The
main
symptom
of
the
virus
gives
it
its
name:
it
leads
to
deformed,
i.e.
crippled
wings.
This
symptom
occurs
when
the
pupa
has
already
been
infected
with
the
virus
and
therefore
shows
developmental
disorders.
A
shortened
abdomen
or
even
dead,
dark-coloured
pupae
can
also
be
consequences
of
the
infection.
In
general,
the
lifespan
of
infected
bees
is
shortened.
This
is
particularly
problematic
in
winter
bees
and
contributes
to
the
colony
losses
that
are
actually
attributed
to
the
Varroa
mite.
A
heavy
infestation
with
the
[Varroa
mite](en/human/disease/pathogens-from-a-to-z/varroa-mite)
indicates
a
high
probability
that
the
colony
is
infected
with
DWV.

**Therapy**

In
Austria,
there
are
no
medicines
available
against
the
virus.
Reducing
the
varroa
infestation
level
also
reduces
the
virus
load.
Varroa
control
is
therefore
an
indirect
means
of
combating
the
virus
load.

**Prevention**

The
beekeeping
operation
should
keep
the
varroa
infestation
level
low
during
the
season,
e.g.
by
brood
removal
or
by
breeding
efforts
to
achieve
varroa
tolerance.

**Situation
in
Austria**

DWV
is
very
common
in
Austria,
it
can
be
detected
in
around
90
%
of
all
apiaries
(
[Zukunft
Biene
2](https://dafne.at/projekte/zukunft-biene-2)
data,
survey
years
2018
to
2020).

**Diagnostics**

DWV
can
be
detected
in
bees
(e.g.
symptomatic
bees).
The
standard
method
of
detection
is
PCR,
but
there
are
also
rapid
tests
for
the
virus.
As
the
quality
of
the
test
depends
heavily
on
the
material
sent
in,
please
inform
yourself
about
the
sample
type
and
packaging
before
sending
it
in.

**Contact
us**

**National
reference
laboratory
for
bee
diseases**

Leitung

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