|  |  |
| --- | --- |
| Logo AGES | |
| Strawberry viruses | |
|  |  |
| 15.01.2025 10:16 Uhr | |

**Strawberry
viruses**

**Strawberry
crinkle
cytorhabdovirus
(SCrVOO),
Strawberry
mild
yellow
edge
virus
(SMYE),
Raspberry
ringspot
virus
(RPRSVO),
Tomato
black
ring
virus
(TBRV),
Arabis
mosaic
virus
(ARMV),
Strawberry
latent
ringspot
virus
(SLRSVO)**

Last
change:
05.09.2024

**Profile**

There
are
different
types
of
viral
diseases
of
strawberry.
The
symptoms
can
vary
greatly
and
depend,
among
other
things,
on
the
virus
strain
and
the
susceptibility
of
the
strawberry
varieties.
The
viruses
mentioned
are
transmitted
by
aphids
or
nematodes
and
are
listed
as
harmful
organisms.

**Damage
symptoms**

The
symptoms
caused
by
viruses
on
strawberries
can
vary
and
are
strongly
dependent
on
the
aggressiveness
of
the
respective
virus
strain
and
the
susceptibility
of
the
strawberry
variety
used.
Mixed
infections
with
other
viruses
can
increase
or
change
the
symptom
expression
of
viral
disease
of
strawberry.
Some
viruses
occur
latently,
meaning
that
the
viruses
are
present
in
the
plant
but
symptoms
are
not
yet
visible
(e.g.
Strawberry
latent
ringspot
virus).
For
other
viruses
(e.g.
Strawberry
mild
yellow
edge
virus),
symptoms
only
become
visible
when
the
strawberry
is
infected
with
another
virus.
Furthermore,
the
symptoms
of
viral
diseases
of
strawberries
also
depend
on
the
season
or
temperature
and
on
the
interval
between
infection
and
inspection.
Therefore,
an
exact
assignment
of
visually
visible
symptoms
to
a
single
virus
is
not
possible.
Instead,
attention
should
be
paid
to
general
virus
symptoms.
In
case
of
suspicion,
laboratory
testing
is
essential.

General
virus
symptoms
are:

* Abnormalities
  of
  the
  chlorophyll
  apparatus,
  e.g.
  mosaics,
  ring
  spots,
  yellowing,
  vein
  lightening,
  or
  necroses
  on
  the
  leaves.
* Shape
  changes,
  e.g.
  rolling,
  curling
  of
  leaves,
  reduction
  of
  leaf
  area
  or
  tissue
  growths
  (enations
  -
  leaf-like
  protrusions),
  shoot
  deformations,
  fruit
  deformation
  or
  hardening
* growth
  inhibition,
  e.g.
  dwarfism

**Host
plants**

* Strawberry
  crinkle
  virus
  and
  Strawberry
  mild
  yellow
  edge
  virus:
  natural
  occurrence
  only
  on
  strawberries
  (Fragaria
  sp.)
* Raspberry
  ringspot
  virus:
  very
  large
  host
  plant
  range;
  main
  hosts
  are
  raspberry,
  strawberry,
  cherry,
  hops,
  grapevine
  and
  elderberry
* Tomato
  black
  ring
  virus:
  large
  host
  plant
  range;
  yield
  losses
  of
  economic
  importance
  on
  strawberry,
  raspberry,
  currant
  and
  peach
* Arabis
  mosaic
  virus:
  very
  large
  host
  plant
  range;
  main
  hosts:
  strawberry,
  raspberry,
  hops,
  grapevine
  and
  elderberry
* Strawberry
  latent
  ringspot
  virus:
  very
  large
  host
  plant
  circle,
  in
  fruit
  growing
  on
  strawberry,
  currant,
  raspberry
  and
  blackberry,
  elderberry,
  peach,
  plum,
  cherry,
  grapevine

**Distribution**

The
above
viruses
are
widespread
in
Europe.

**Propagation
and
transmission**

Strawberry
crinkle
virus
and
Strawberry
mild
yellow
edge
virus
are
transmitted
by
the
aphid
species
*Chaetosiphon
fragaefolii*
occurring
on
strawberries.

Strawberry
latent
ringspot
virus,
Raspberry
ringspot
virus,
Tomato
black
ring
virus
and
Arabis
mosaic
virus
are
transmitted
by
soil
nematodes
of
the
species
*Longidorus*
sp.
and
*Xiphinema*
sp.

**Economic
importance**

While
Strawberry
latent
ringspot
virus
and
Tomato
black
ring
virus
cause
only
minor
damage
and
are
of
secondary
economic
importance,
infections
by
Raspberry
ringspot
virus,
Arabis
mosaic
virus
and
especially
Strawberry
crinkle
virus
weaken
plant
development.
They
lead
to
high
yield
losses,
especially
in
mixed
infections,
and
can
cause
considerable
economic
damage
to
some
varieties.
Strawberry
mild
yellow
edge
virus
causes
damage
only
in
mixed
infections.

However,
due
to
the
requirements
in
strawberry
certification
and
the
nowadays
common
meristem
propagation
(propagation
from
plant
cells
under
lower
sterile
conditions)
in
the
production
of
elite
plants,
the
practical
importance
of
virus
diseases
in
strawberries
has
decreased
considerably
in
the
last
decades.

**Prevention
and
control**

**Preventive
measures**

* Purchase
  of
  recognized,
  certified
  planting
  material
  (elite
  plants)
  as
  starting
  material
  for
  propagation
* Examination
  of
  plants
  on
  arrival
  at
  the
  farm
  for
  latent
  infections
* Planting
  material
  production:
  examination
  of
  the
  soil
  for
  the
  virus-transmitting
  nematode
  species
  *Longidorus*
  sp.,
  *Xiphinema*
  sp.
* The
  distance
  of
  the
  propagation
  area
  to
  strawberry
  plants
  for
  fruit
  production
  should
  be
  at
  least
  50
  m
* prevention
  of
  virus
  transmission
  by
  vector
  treatment
  (aphids)
  with
  approved
  plant
  protection
  products
  (see
  [list
  of
  plant
  protection
  products
  approved
  in
  Austria](https://www.baes.gv.at/zulassung/pflanzenschutzmittel/pflanzenschutzmittelregister/))
* regular
  control
  of
  infestation
  during
  cultivation

**Measures
in
case
of
suspicion**

* sampling
  and
  sending
  plants
  with
  typical
  symptoms
  to
  a
  testing
  laboratory
* Suspension
  of
  the
  sale
  of
  plants
  from
  suspected
  plant
  stocks
  or
  deliveries
  until
  the
  laboratory
  results
  are
  available
* Remove
  and
  destroy
  diseased
  plants
  without
  harm
  to
  prevent
  further
  spreading
* Determine
  the
  origin
  of
  the
  infestation
  (e.g.
  additional
  purchase,
  ...)
* In
  case
  of
  positive
  detection
  of
  viruses
  transmitted
  by
  nematodes,
  the
  field
  should
  no
  longer
  be
  used
  for
  seedling
  production.

**Phytosanitary
status**

All
of
the
above
viruses
are
Union-regulated
non-quarantine
pests.

**Services**

[Plant
Health
Services](en/plant/plant-health/plant-health-information)