

Date: 16/01/2020

To,  
The Principal  
K. K. Wagh College of Agriculture,  
Nashik

Subject Regarding permission for Certificate Course.....

Respected Sir,

On behalf of the Department of Entomology, we humbly request permission to initiate a Certificate course titled 'Insect borne diseases in crop and their management'. This course is scheduled from 04/02/2020 to 09/02/2020 and will involve approximately 40 final-year students. It is anticipated that this course will greatly benefit our students in enhancing their knowledge about management of insect borne diseases in crop. We kindly ask for your approval for the implementation of this course.

Thanking You,

Yours faithfully,

  
Mr. T. B. Ugale  
Course Coordinator





K. K. Wagh Education Society's  
K. K. Wagh College of Agriculture,  
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Saraswati Nagar, Panchavati, Nashik- 422 003. Maharashtra  
College Code:11135 AISHE Code: C-50690

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Certificate course in  
**Insect borne diseases in crop and their management**

Academic Year 2019-20

**Syllabus Committee**

Sr no	Name of teacher	Designation	Department	Role in course
1	Mr. T. B. Ugale	Assistant Professor	Entomology	Course coordinator
2	Mr. A. S. Mochi	Assistant Professor	Entomology	Committee member
3	Miss. K. G. Shete	Assistant Professor	Entomology	Committee member
4	Mrs. S. K. Ahirrao	Assistant Professor	Plant Pathology	Committee member

  
Course Coordinator

  
Principal  
**PRINCIPAL**  
K. K. Wagh College of Agriculture  
Saraswatinagar, Panchavati, Nashik-3







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Date: 22/01/2020

**Academic Year 2019-20**  
**Department of Entomology**  
**Minutes of the Board of Studies Meeting for the Short-Term Certificate**  
**Course**

A meeting of the Board of Studies for the Short-term Certificate Course in 'Insect borne diseases in crop and their management' was convened on 21/01/2020, at 11:00 AM in the Department of Entomology. The meeting was attended by the following Syllabus Design Committee members:

Sr no	Name of the expert	Designation	Sign
1	Dr. S. M. Hadole	Principal	
2	Mr. T. B. Ugale	Course Coordinator	
3	Mr. A. S. Mochi	Member	
4	Miss. K. G. Shete	Member	
5	Mrs. S. K. Ahirrao	Member	

**Minutes of Meeting**

The Board of Studies convened a meeting on 21/01/2020, at 11:00 AM in the Department of Entomology to address various aspects concerning the Short-Term Certificate Course in 'Insect borne diseases in crop and their management'. The meeting focused on the following key points:

1. Syllabus Formation: Members deliberated on developing a syllabus that emphasizes on relevant knowledge about insect borne diseases.
2. Dissemination of Work: Strategies for effectively manage the disease which is transmitted by insects were discussed to aid students in the course.
3. Encouragement of Students: The meeting stressed the importance of offering guidance and motivation to students for effective management of plant diseases.
4. Examination of Short-Term Course: The examination structure and assessment methods for the short-term course were reviewed. The board explored ways to ensure fair and comprehensive evaluations that accurately assess students.
5. The meeting concluded with a commitment to refine the course and its delivery methods to better meet the needs of students enrolled in the Certificate Course in 'Insect borne diseases in crop and their management'.

Course coordinator



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**Department of Entomology**  
**Certificate course in**  
**'Insect borne diseases in Crops and their Management'**  
**Academic Year 2019-20**

**Syllabus Outcomes:**

1. Gain awareness of historical and current perspectives of vector.
2. Gain knowledge about different methods of viral diseases management.
3. Acquire knowledge on interaction of virus and vector relationship.
4. Understand the identification of economically important of viral diseases.
5. Explore Techniques for management of vector.

Sr. No	Topic	Description	No. of Lectures
1	Transmission of plant diseases by insects	Introduction- History of Insect, virus, Bacteria and economic importance.	06 hours
2	Role of insects in bacterial diseases of plants	Mechanisms of transmission of bacterial viral disease in Crops	03 hours
3	Diseases of Crops	Bacterial soft rots Bacterial wilts of plants Bacterial wilt of cucurbits Bacterial wilt of corn Fire blight of pears, apples and other rosaceous plants	03 hours
4	Insect transmission of xylem-inhabiting bacteria	Insect transmission of xylem-inhabiting bacteria	06 hours
5	Insect transmission of plant diseases caused by mollicutes	Mechanisms of Insect transmission of plant diseases caused by mollicutes	06 hours
6	Diseases of fruit and seeds in the field	Diseases of fruits and seeds transmitted by insect and management of Insect pest	06 hours
7	Insect transmission of plant pathogenic viruses	Virus-vector relationships Aphids and aphid-transmitted viruses Semi-persistent viruses Leafhoppers and planthoppers, and transmission of plant viruses Whitefly transmission of plant viruses Thrips transmission of plant viruses Virus transmission by insects that have biting/chewing mouthparts	06 hours
Total			36 hours

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Certificate course in  
**'Insect borne diseases in crop and their management'**  
Academic Year 2019-20

**Examination Methodology**

Sr no	Nature of exam	Marks
1	Written	30
2	Practical	20
3	Total	50

**Reference:**

- 1) **Insect Vectors and Plant Pathogens** – N. S. Butter
- 2) **Insect Transmission of Plant Pathogens** – Michelle Heck
- 3) **Vectors of Plant Pathogens** – Erry F. Harris and Karl Maramorosch
- 4) **Insect-Borne Plant Pathogens and Their Vectors: Ecology, Evolution, and Complex Interaction** – Sanford D. Eigenbrode, Nilsa A. Bosque-Perez, and Thomas S. Davis
- 5) **Insects and Plant Diseases** - Kenneth M. Smith

  
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Date: 23/01/2020

## Student Notice

All the students of B. Sc. (Hons.) Agriculture final year are informed that for the academic year 2019-2020 the Certificate Course on '**Insect borne diseases in crop and their management**' is starting from 04/02/2020 to 09/02/2020. For this certificate course students should submit their names to the Certificate Course Coordinator Mr. T. B. Ugale up to 03/02/2020

Duration: 36 Hrs. 04/02/2020 to 09/02/2020  
Time: Morning Session: 10.00 am to 1.00 pm  
Afternoon session: 2.00 pm to 5.00 pm

Note: This course is free of cost to all students.

  
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## STUDENT REGISTRATION FORM

Academic Year: 2019-20  
(Department of Entomology)

CERTIFICATE COURSE

**'Insect borne diseases in crop and their management'**

For Department Use Only

Registration No.: AKN/2016/095

Name of the Student: Shinde Mayur Ashok

Mother's Name: Manika Ashok Shinde

Father's Name: Ashok Shinde Year: 1<sup>st</sup> / 2<sup>nd</sup> / 3<sup>rd</sup> / 4<sup>th</sup>

E-Mail ID: mayurshinde015@gmail.com

Address: Pimpalgaon, Beopant, Tal: Niphad, Dist: Nashik

State: Maharashtra PIN Code: 422209

Mobile No: 7744890418 Alternate contact number: 772000705

Gender: Male  Female  Other  Religion: Hindu

Date of Birth: 16.11.1997

Educational Qualification (at the time of admission):

HSC 52.90 Other

Signature of Student

Place: Nashik

Date: 24/01/2020





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**Department of Entomology**  
**Certificate course in**  
**Insect borne diseases in crop and their management**  
**Academic Year 2019-20**  
**Enrolled Student List**

SR NO	REGISTRATION NO	NAME OF STUDENT	SIGN
1	AKN-2016/021	Chavan Tushar Ramdas	
2	AKN-2016/050	Khairnar Pratiksha Uttam	
3	AKN-2016/082	Ratnpgol Akshata Balappa	
4	AKN-2016/001	Abnave Ankita Jayendranath	
5	AKN-2016/120	Zuting Akshay Balasaheb	
6	AKN-2016/091	Shewale Jayashri Nandlal	
7	AKN-2016/116	Wagdare Sushilkumar Tabaji	
8	AKN-2016/093	Shinde Anil Gangadhar	
9	AKN-2016/054	Lavand Tushar Tanaji	
10	AKN-2016/089	Shankhpal Gokul Sopanrao	
11	AKN-2016/071	Patil Krishnvardhan Jayawant	
12	AKN-2016/058	Misar Samarth Jagannath	
13	AKN-2016/100	Shirsath Prafulla Dattatray	
14	AKN-2016/055	Mandlik Rasika Ramesh	
15	AKN-2016/014	Bhosale Rushikesh Kailas	
16	AKN-2016/017	Bombale Yashkumar Vijay	
17	AKN-2016/005	Belkar Prakash Bhau	
18	AKN-2016/015	Bhoye Puja Bhaurao	
19	AKN-2016/035	Gawali Aditi Datta	
20	AKN-2016/040	Jadhav Akshay Subhash	







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21	AKN-2016/039	Ingle Prasheek Jalindar	
22	AKN-2016/037	Ghughe Sachin Bhagwan	
23	AKN-2016/023	Dashpute Swapnil Dashrath	
24	AKN-2016/096	Shinde Nisarg Shivnath	
25	AKN-2016/028	Dhangar Nilesh Vikas	
26	AKN-2016/104	Sonone Manoj Prabhakar	
27	AKN/D-2017/014	Mhaisdhune Rohit Pandit	
28	AKN-2016/038	Ichche Vishnu Ramdas	
29	AKN/D-2017/002	Bacchav Harshad Sunil	
30	AKN-2015/021	Desale Prashant Chandrashe	
31	AKN/D-2017/003	Chaudhari Rakesh Dinkar	
32	AKN/D-2017/007	Ghule Sumit Damodar	
33	AKN/D-2017/012	Khandave Prasad Rajaram	
34	AKN-2016/098	Shinde Tushar Tanaji	
35	AKN/D-2017/020	Shirsath Vikas Bharat	
36	AKN-2015/116	Wagh Rushiprasad Shantaram	
37	AKN/D-2017/016	Palvi Manish Papat	
38	AKN-2016/095	Shinde Mayur Ashok	
39	AKN-2016/080	Rakh Suraj Ramrao	
40	AKN/D-2017/011	Khalkar Amol Shantaram	

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## Department of Entomology

Certificate course in  
**'Insect borne diseases in crop and their management**  
Academic Year 2019-20

### Schedule of the course

Sr No	Topic	Description	Name of the teacher	Department
1	Transmission of plant diseases by insects	Introduction- History of Insect, virus, Bacteria and economic importance.	Mr. T. B. Ugale	Entomology
2	Role of insects in bacterial diseases of plants	Mechanisms of transmission of bacterial viral disease in Crops	Mr. T. B. Ugale	Entomology
3	Diseases of Crops	Bacterial soft rots Bacterial wilts of plants Bacterial wilt of cucurbits Bacterial wilt of corn Fire blight of pears, apples and other rosaceous plants	Mrs. S. K. Ahirrao	Plant Pathology
4	Insect transmission of xylem-inhabiting bacteria	Insect transmission of xylem-inhabiting bacteria	Mr. M. S. Mochi	Entomology
5	Insect transmission of plant diseases caused by mollicutes	Mechanisms of Insect transmission of plant diseases caused by mollicutes	Miss. K. G. Shete	Entomology
6	Diseases of fruit and seeds in the field	Diseases of fruits and seeds transmitted by insect and management of Insect pest	Mrs. S. K. Ahirrao	Plant Pathology
7	Insect transmission of plant pathogenic viruses	Virus-vector relationships Aphids and aphid-transmitted viruses Semi-persistent viruses Leafhoppers and planthoppers, and transmission of plant viruses Whitefly transmission of plant viruses Thrips transmission of plant viruses Virus transmission by insects that have biting/chewing mouthparts	Mr. T. B. Ugale	Entomology

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**Department of Entomology**  
**Certificate course in**  
**'Insect borne diseases in crop and their management**  
**Academic Year 2019-20**

**Time Table**

Sr no	Date	Time	Topic	
1	04/02/2020	10.00 am- 01.00 pm	03.00 pm - 05.00 pm	Transmission of plant diseases by insects
2	05/02/2020	10.00 am- 01.00 pm	03.00 pm - 05.00 pm	Role of insects in bacterial diseases of plants Diseases of Crops
3	06/02/2020	10.00 am- 01.00 pm	03.00 pm - 05.00 pm	Insect transmission of xylem-inhabiting bacteria
4	07/02/2020	10.00 am- 01.00 pm	03.00 pm - 05.00 pm	Insect transmission of plant diseases caused by mollicutes
5	08./02/2020	10.00 am- 01.00 pm	03.00 pm - 05.00 pm	Diseases of fruit and seeds in the field
6	09/02/2020	10.00 am- 01.00 pm	03.00 pm - 05.00 pm	Insect transmission of plant pathogenic viruses

  
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# K K WAGH COLLEGE OF AGRICULTURE, NASHIK

## Department of Entomology

### Certificate course in ' Insect borne diseases in crop and their management'

Academic Year 2019-20

Sr No	Registration no	Name of students	Date:	04/02/2020 to		05/02/2020		06/02/2020		07/02/2020		08/02/2020		09/02/2020	
				Time:	10.00-1.00	2.00-5.00	10.00-1.00	2.00-5.00	10.00-1.00	2.00-5.00	10.00-1.00	2.00-5.00	10.00-1.00	2.00-5.00	10.00-1.00
1	AKN-2016/021	Chavan Tushar Ramdas		<u>TRam</u>	<u>TRam</u>	<u>TRam</u>	<u>TRam</u>	<u>TRam</u>	<u>TRam</u>	<u>TRam</u>	<u>TRam</u>	<u>TRam</u>	<u>TRam</u>	<u>TRam</u>	<u>TRam</u>
2	AKN-2016/050	Khairnar Pratiksha Uttam		<u>PKe</u>	<u>PKe</u>	<u>PKe</u>	<u>PKe</u>	<u>PKe</u>	<u>PKe</u>	<u>PKe</u>	<u>PKe</u>	<u>PKe</u>	<u>PKe</u>	<u>PKe</u>	<u>PKe</u>
3	AKN-2016/082	Ratnpgol Akshata Balappa		<u>ARat</u>	<u>ARat</u>	<u>ARat</u>	<u>ARat</u>	<u>ARat</u>	<u>ARat</u>	<u>ARat</u>	<u>ARat</u>	<u>ARat</u>	<u>ARat</u>	<u>ARat</u>	<u>ARat</u>
4	AKN-2016/001	Abnave Ankita Jayendranath		<u>ABnave</u>	<u>ABnave</u>	<u>ABnave</u>	<u>ABnave</u>	<u>ABnave</u>	<u>ABnave</u>	<u>ABnave</u>	<u>ABnave</u>	<u>ABnave</u>	<u>ABnave</u>	<u>ABnave</u>	<u>ABnave</u>
5	AKN-2016/120	Zuting Akshay Balasaheb		<u>AZ</u>	<u>AZ</u>	<u>AZ</u>	<u>AZ</u>	<u>AZ</u>	<u>AZ</u>	<u>AZ</u>	<u>AZ</u>	<u>AZ</u>	<u>AZ</u>	<u>AZ</u>	<u>AZ</u>
6	AKN-2016/091	Shewale Jayashri Nandlal		<u>JShe</u>	<u>JShe</u>	<u>JShe</u>	<u>JShe</u>	<u>JShe</u>	<u>JShe</u>	<u>JShe</u>	<u>JShe</u>	<u>JShe</u>	<u>JShe</u>	<u>JShe</u>	<u>JShe</u>
7	AKN-2016/116	Wagdare Sushilkumar Tabaji		<u>SWag</u>	<u>SWag</u>	<u>SWag</u>	<u>SWag</u>	<u>SWag</u>	<u>SWag</u>	<u>SWag</u>	<u>SWag</u>	<u>SWag</u>	<u>SWag</u>	<u>SWag</u>	<u>SWag</u>
8	AKN-2016/093	Shinde Anil Gangadhar		<u>ASHin</u>	<u>ASHin</u>	<u>ASHin</u>	<u>ASHin</u>	<u>ASHin</u>	<u>ASHin</u>	<u>ASHin</u>	<u>ASHin</u>	<u>ASHin</u>	<u>ASHin</u>	<u>ASHin</u>	<u>ASHin</u>
9	AKN-2016/054	Lavand Tushar Tanaji		<u>TLav</u>	<u>TLav</u>	<u>TLav</u>	<u>TLav</u>	<u>TLav</u>	<u>TLav</u>	<u>TLav</u>	<u>TLav</u>	<u>TLav</u>	<u>TLav</u>	<u>TLav</u>	<u>TLav</u>
10	AKN-2016/089	Shankhpal Gokul Sopanrao		<u>SGoku</u>	<u>SGoku</u>	<u>SGoku</u>	<u>SGoku</u>	<u>SGoku</u>	<u>SGoku</u>	<u>SGoku</u>	<u>SGoku</u>	<u>SGoku</u>	<u>SGoku</u>	<u>SGoku</u>	<u>SGoku</u>
11	AKN-2016/071	Patil Krishnvardhan Jayawant		<u>SPat</u>	<u>SPat</u>	<u>SPat</u>	<u>SPat</u>	<u>SPat</u>	<u>SPat</u>	<u>SPat</u>	<u>SPat</u>	<u>SPat</u>	<u>SPat</u>	<u>SPat</u>	<u>SPat</u>
12	AKN-2016/058	Misar Samarth Jagannath		<u>AMisar</u>	<u>AMisar</u>	<u>AMisar</u>	<u>AMisar</u>	<u>AMisar</u>	<u>AMisar</u>	<u>AMisar</u>	<u>AMisar</u>	<u>AMisar</u>	<u>AMisar</u>	<u>AMisar</u>	<u>AMisar</u>
13	AKN-2016/100	Shirsath Prafulla Dattatray		<u>PShir</u>	<u>PShir</u>	<u>PShir</u>	<u>PShir</u>	<u>PShir</u>	<u>PShir</u>	<u>PShir</u>	<u>PShir</u>	<u>PShir</u>	<u>PShir</u>	<u>PShir</u>	<u>PShir</u>
14	AKN-2016/055	Mandlik Rasika Ramesh		<u>RMand</u>	<u>RMand</u>	<u>RMand</u>	<u>RMand</u>	<u>RMand</u>	<u>RMand</u>	<u>RMand</u>	<u>RMand</u>	<u>RMand</u>	<u>RMand</u>	<u>RMand</u>	<u>RMand</u>
15	AKN-2016/014	Bhosale Rushikesh Kailas		<u>RBhos</u>	<u>RBhos</u>	<u>RBhos</u>	<u>RBhos</u>	<u>RBhos</u>	<u>RBhos</u>	<u>RBhos</u>	<u>RBhos</u>	<u>RBhos</u>	<u>RBhos</u>	<u>RBhos</u>	<u>RBhos</u>
16	AKN-2016/017	Bombale Yashkumar Vijay		<u>VBomb</u>	<u>VBomb</u>	<u>VBomb</u>	<u>VBomb</u>	<u>VBomb</u>	<u>VBomb</u>	<u>VBomb</u>	<u>VBomb</u>	<u>VBomb</u>	<u>VBomb</u>	<u>VBomb</u>	<u>VBomb</u>
17	AKN-2016/005	Belkar Prakash Bhau		<u>BBel</u>	<u>BBel</u>	<u>BBel</u>	<u>BBel</u>	<u>BBel</u>	<u>BBel</u>	<u>BBel</u>	<u>BBel</u>	<u>BBel</u>	<u>BBel</u>	<u>BBel</u>	<u>BBel</u>
18	AKN-2016/015	Bhoye Puja Bhaurao		<u>PBhoye</u>	<u>PBhoye</u>	<u>PBhoye</u>	<u>PBhoye</u>	<u>PBhoye</u>	<u>PBhoye</u>	<u>PBhoye</u>	<u>PBhoye</u>	<u>PBhoye</u>	<u>PBhoye</u>	<u>PBhoye</u>	<u>PBhoye</u>





# K K WAGH COLLEGE OF AGRICULTURE, NASHIK

## Department of Entomology

### Certificate course in ' Insect borne diseases in crop and their management' Academic Year 2019-20

Sr No	Registration no	Name of students	Date:	04/02/2020 to		05/02/2020		06/02/2020		07/02/2020		08/02/2020		09/02/2020	
				Time:	10.00-1.00	2.00-5.00	10.00-1.00	2.00-5.00	10.00-1.00	2.00-5.00	10.00-1.00	2.00-5.00	10.00-1.00	2.00-5.00	10.00-1.00
1	AKN-2016/021	Chavan Tushar Ramdas		<u>Tushar</u>	<u>Tushar</u>	<u>Tushar</u>	<u>Tushar</u>	<u>Tushar</u>	<u>Tushar</u>	<u>Tushar</u>	<u>Tushar</u>	<u>Tushar</u>	<u>Tushar</u>	<u>Tushar</u>	<u>Tushar</u>
2	AKN-2016/050	Khairnar Pratiksha Uttam		<u>Pke</u>	<u>Pke</u>	<u>Pke</u>	<u>Pke</u>	<u>Pke</u>	<u>Pke</u>	<u>Pke</u>	<u>Pke</u>	<u>Pke</u>	<u>Pke</u>	<u>Pke</u>	<u>Pke</u>
3	AKN-2016/082	Ratnpgol Akshata Balappa		<u>Apdga</u>	<u>Apdga</u>	<u>Apdga</u>	<u>Apdga</u>	<u>Apdga</u>	<u>Apdga</u>	<u>Apdga</u>	<u>Apdga</u>	<u>Apdga</u>	<u>Apdga</u>	<u>Apdga</u>	<u>Apdga</u>
4	AKN-2016/001	Abnave Ankita Jayendranath		<u>Abnar</u>	<u>Abnar</u>	<u>Abnar</u>	<u>Abnar</u>	<u>Abnar</u>	<u>Abnar</u>	<u>Abnar</u>	<u>Abnar</u>	<u>Abnar</u>	<u>Abnar</u>	<u>Abnar</u>	<u>Abnar</u>
5	AKN-2016/120	Zuting Akshay Balasaheb		<u>Az</u>	<u>Az</u>	<u>Az</u>	<u>Az</u>	<u>Az</u>	<u>Az</u>	<u>Az</u>	<u>Az</u>	<u>Az</u>	<u>Az</u>	<u>Az</u>	<u>Az</u>
6	AKN-2016/091	Shewale Jayashri Nandlal		<u>Jshwale</u>	<u>Jshwale</u>	<u>Jshwale</u>	<u>Jshwale</u>	<u>Jshwale</u>	<u>Jshwale</u>	<u>Jshwale</u>	<u>Jshwale</u>	<u>Jshwale</u>	<u>Jshwale</u>	<u>Jshwale</u>	<u>Jshwale</u>
7	AKN-2016/116	Wagdare Sushilkumar Tabaji		<u>Spae</u>	<u>Spae</u>	<u>Spae</u>	<u>Spae</u>	<u>Spae</u>	<u>Spae</u>	<u>Spae</u>	<u>Spae</u>	<u>Spae</u>	<u>Spae</u>	<u>Spae</u>	<u>Spae</u>
8	AKN-2016/093	Shinde Anil Gangadhar		<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>
9	AKN-2016/054	Lavand Tushar Tanaji		<u>Lavand</u>	<u>Lavand</u>	<u>Lavand</u>	<u>Lavand</u>	<u>Lavand</u>	<u>Lavand</u>	<u>Lavand</u>	<u>Lavand</u>	<u>Lavand</u>	<u>Lavand</u>	<u>Lavand</u>	<u>Lavand</u>
10	AKN-2016/089	Shankhpal Gokul Sopanrao		<u>Sshakul</u>	<u>Sshakul</u>	<u>Sshakul</u>	<u>Sshakul</u>	<u>Sshakul</u>	<u>Sshakul</u>	<u>Sshakul</u>	<u>Sshakul</u>	<u>Sshakul</u>	<u>Sshakul</u>	<u>Sshakul</u>	<u>Sshakul</u>
11	AKN-2016/071	Patil Krishnvardhan Jayawant		<u>Spatil</u>	<u>Spatil</u>	<u>Spatil</u>	<u>Spatil</u>	<u>Spatil</u>	<u>Spatil</u>	<u>Spatil</u>	<u>Spatil</u>	<u>Spatil</u>	<u>Spatil</u>	<u>Spatil</u>	<u>Spatil</u>
12	AKN-2016/058	Misar Samarth Jagannath		<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>	<u>Ashir</u>
13	AKN-2016/100	Shirsath Prafulla Dattatray		<u>Shirsath</u>	<u>Shirsath</u>	<u>Shirsath</u>	<u>Shirsath</u>	<u>Shirsath</u>	<u>Shirsath</u>	<u>Shirsath</u>	<u>Shirsath</u>	<u>Shirsath</u>	<u>Shirsath</u>	<u>Shirsath</u>	<u>Shirsath</u>
14	AKN-2016/055	Mandlik Rasika Ramesh		<u>Rasika</u>	<u>Rasika</u>	<u>Rasika</u>	<u>Rasika</u>	<u>Rasika</u>	<u>Rasika</u>	<u>Rasika</u>	<u>Rasika</u>	<u>Rasika</u>	<u>Rasika</u>	<u>Rasika</u>	<u>Rasika</u>
15	AKN-2016/014	Bhosale Rushikesh Kailas		<u>Rushikesh</u>	<u>Rushikesh</u>	<u>Rushikesh</u>	<u>Rushikesh</u>	<u>Rushikesh</u>	<u>Rushikesh</u>	<u>Rushikesh</u>	<u>Rushikesh</u>	<u>Rushikesh</u>	<u>Rushikesh</u>	<u>Rushikesh</u>	<u>Rushikesh</u>
16	AKN-2016/017	Bombale Yashkumar Vijay		<u>Bomb</u>	<u>Bomb</u>	<u>Bomb</u>	<u>Bomb</u>	<u>Bomb</u>	<u>Bomb</u>	<u>Bomb</u>	<u>Bomb</u>	<u>Bomb</u>	<u>Bomb</u>	<u>Bomb</u>	<u>Bomb</u>
17	AKN-2016/005	Belkar Prakash Bhu		<u>Pr</u>	<u>Pr</u>	<u>Pr</u>	<u>Pr</u>	<u>Pr</u>	<u>Pr</u>	<u>Pr</u>	<u>Pr</u>	<u>Pr</u>	<u>Pr</u>	<u>Pr</u>	<u>Pr</u>
18	AKN-2016/015	Bhoye Puja Bhaurao		<u>Pbhoys</u>	<u>Pbhoys</u>	<u>Pbhoys</u>	<u>Pbhoys</u>	<u>Pbhoys</u>	<u>Pbhoys</u>	<u>Pbhoys</u>	<u>Pbhoys</u>	<u>Pbhoys</u>	<u>Pbhoys</u>	<u>Pbhoys</u>	<u>Pbhoys</u>







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K. K. Wagh College of Agriculture,  
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College Code;11135 AISHE Code: C-50690

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### Department of Entomology

Certificate course in  
**Insect borne diseases in crop and their management**  
Academic Year 2019-20


### Exam Time Table

All enrolled students of the Certificate Course are hereby informed that for the academic year 2019-20, the Certificate Course on Insect borne diseases in crop and their management has been completed. The examination for this certificate course is scheduled to be conducted on 11/02/2020. Therefore, all students are required to be present without exception.

Note: Time Table is as follow

Sr. No	Date	Time	Certificate course subject
1	11/02/2020	1:00 to 3:00 pm	Theory exam: Insect borne diseases in crop and their management
2		3:00 to 5:00 pm	Practical Exam: Insect borne diseases in crop and their management

  
Course Coordinator

  
Exam Incharge

  
Principal  
K. K. Wagh College of Agriculture  
Saraswatinagar, Panchavati, Nashik-3







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**Department of Entomology**  
Certificate course in 'Insect borne diseases in crop and their management'  
Academic Year 2019-20  
**Exam Block Report**

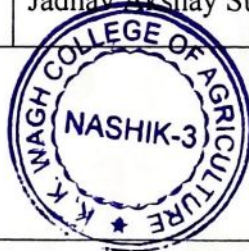
Class- Final Year

Date- 11/02/2020

Subject: Theory Paper of Basics of Nematology

Block no: 03

SR NO	REGISTRATION NO	NAME OF STUDENT	SIGN
1	AKN-2016/021	Chavan Tushar Ramdas	
2	AKN-2016/050	Khairnar Pratiksha Uttam	
3	AKN-2016/082	Ratnpgol Akshata Balappa	
4	AKN-2016/001	Abnave Ankita Jayendranath	
5	AKN-2016/120	Zuting Akshay Balasaheb	
6	AKN-2016/091	Shewale Jayashri Nandlal	
7	AKN-2016/116	Wagdare Sushilkumar Tabaji	
8	AKN-2016/093	Shinde Anil Gangadhar	
9	AKN-2016/054	Lavand Tushar Tanaji	
10	AKN-2016/089	Shankhpal Gokul Sopanrao	
11	AKN-2016/071	Patil Krishnvardhan Jayawant	
12	AKN-2016/058	Misar Samarth Jagannath	
13	AKN-2016/100	Shirsath Prafulla Dattatray	
14	AKN-2016/055	Mandlik Rasika Ramesh	
15	AKN-2016/014	Bhosale Rushikesh Kailas	
16	AKN-2016/017	Bombale Yashkumar Vijay	
17	AKN-2016/005	Belkar Prakash Bhau	
18	AKN-2016/015	Bhoye Puja Bhaurao	
19	AKN-2016/035	Gawali Aditi Datta	
20	AKN-2016/040	Jadhav Akshay Subhash	







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College Code: 11135 AISHE Code: C-50690

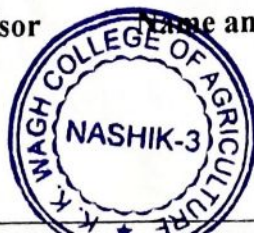
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21	AKN-2016/039	Ingle Prasheek Jalindar	
22	AKN-2016/037	Ghughe Sachin Bhagwan	
23	AKN-2016/023	Dashpute Swapnil Dashrath	
24	AKN-2016/096	Shinde Nisarg Shivnath	
25	AKN-2016/028	Dhangar Nilesh Vikas	
26	AKN-2016/104	Sonone Manoj Prabhakar	
27	AKN/D-2017/014	Mhaisdhune Rohit Pandit	
28	AKN-2016/038	Ichche Vishnu Ramdas	
29	AKN/D-2017/002	Bacchav Harshad Sunil	
30	AKN-2015/021	Desale Prashant Chandrashe	
31	AKN/D-2017/003	Chaudhari Rakesh Dinkar	
32	AKN/D-2017/007	Ghule Sumit Damodar	
33	AKN/D-2017/012	Khandave Prasad Rajaram	
34	AKN-2016/098	Shinde Tushar Tanaji	
35	AKN/D-2017/020	Shirsath Vikas Bharat	
36	AKN-2015/116	Wagh Rushiprasad Shantaram	
37	AKN/D-2017/016	Palvi Manish Popat	
38	AKN-2016/095	Shinde Mayur Ashok	
39	AKN-2016/080	Rakh Suraj Ramrao	
40	AKN/D-2017/011	Khalkar Amol Shantaram	

Total no of student: 40  
No of student present: 40  
No of students absent: Nil

Name and Sign of Jr. Supervisor

Name and Sign of Sr. Supervisor





**K. K. Wagh College of Agriculture, Nashik**  
**Department of Entomology**  
Certificate course in 'Insect borne diseases in crop and their management'  
Academic Year 2019-20

Class:	Final Year	Semester :	VIII
Day & Date:	Monday, 11/02/2020	Time:	1:00 to 3:00 pm
Subject:	'Insect borne diseases in crop and their management'	Marks:	30 M
Name of student:	shinde Mayur Ashok	Registration no:	AKM/2016/095

**THEORY EXAMINATION**

1. Which insect transmits the Tomato spotted wilt virus?  
a) Aphids  
b) Whiteflies  
c) Thrips  
d) Leafhoppers
2. What is the primary vector of the Rice tungro virus?  
a) Brown planthopper  
b) Green leafhopper  
c) Whitefly  
d) Aphid
3. Which insect vector is responsible for transmitting the Citrus greening disease (Huanglongbing)?  
a) Asian citrus psyllid  
b) Whitefly  
c) Aphid  
d) Thrips
4. Which insect transmits the Maize streak virus?  
a) Leafhoppers  
b) Whiteflies  
c) Aphids  
d) Thrips
5. What is the main vector of the Cucumber mosaic virus?  
a) Aphids  
b) Whiteflies  
c) Thrips  
d) Leafhoppers
6. Which insect transmits the Bean golden yellow mosaic virus?  
a) Whiteflies  
b) Aphids  
c) Thrips  
d) Leafhoppers
7. What is the primary vector of the Tomato yellow leaf curl virus?  
a) Whiteflies  
b) Aphids  
c) Thrips

26  
30



d) Leafhoppers

2 ✓ 8. Which insect vector is responsible for the transmission of the Potato leafroll virus?

- ✓ a) Aphids
- b) Whiteflies
- c) Thrips
- d) Leafhoppers

2 ✓ 9. What insect transmits the Barley yellow dwarf virus?

- ✓ a) Aphids
- b) Leafhoppers
- c) Whiteflies
- d) Thrips

0 ✓ 10. is the primary vector for the transmission of the Sugarcane mosaic virus?

- a) Aphids
- b) Whiteflies
- ✓ c) Thrips
- d) Leafhoppers

2 ✓ 11. What is the main vector of the Grapevine fanleaf virus?

- ✓ a) Nematodes
- b) Aphids
- c) Whiteflies
- d) Thrips

2 ✓ 12. Which insect transmits the African cassava mosaic virus?

- a) Whiteflies
- b) Aphids
- ✓ c) Thrips
- d) Leafhoppers

2 ✓ 13. What is the primary vector of the Cotton leaf curl virus?

- ✓ a) Whiteflies
- b) Aphids
- c) Thrips
- d) Leafhoppers

2 ✓ 14. Which insect transmits the Watermelon mosaic virus?

- ✓ a) Aphids
- b) Whiteflies
- c) Thrips
- d) Leafhoppers

2 ✓ 15. What is the main vector of the Lettuce mosaic virus?

- ✓ a) Aphids
- b) Whiteflies
- c) Thrips
- d) Leafhoppers







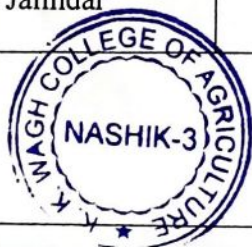
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**Department of Entomology**  
Certificate course in  
**'Insect borne diseases in crop and their management**  
Academic Year 2019-20

**Student Result**

Sr No	Registration No	Name Of Student	Theory marks (30)	Practical Marks (20)	Mark Out of Total 50
1	AKN-2016/021	Chavan Tushar Ramdas	28	18	46
2	AKN-2016/050	Khairnar Pratiksha Uttam	28	17	45
3	AKN-2016/082	Ratnpgol Akshata Balappa	30	17	47
4	AKN-2016/001	Abnave Ankita Jayendranath	28	16	44
5	AKN-2016/120	Zuting Akshay Balasaheb	26	18	44
6	AKN-2016/091	Shewale Jayashri Nandlal	30	17	47
7	AKN-2016/116	Wagdare Sushilkumar Tabaji	28	16	44
8	AKN-2016/093	Shinde Anil Gangadhar	30	16	46
9	AKN-2016/054	Lavand Tushar Tanaji	30	17	47
10	AKN-2016/089	Shankhpal Gokul Sopanrao	30	16	46
11	AKN-2016/071	Patil Krishnvardhan Jayawant	28	18	46
12	AKN-2016/058	Misar Samarth Jagannath	28	18	46
13	AKN-2016/100	Shirsath Prafulla Dattatray	28	17	45
14	AKN-2016/055	Mandlik Rasika Ramesh	28	16	44
15	AKN-2016/014	Bhosale Rushikesh Kailas	26	18	44
16	AKN-2016/017	Bombale Yashkumar Vijay	26	18	44
17	AKN-2016/005	Belkar Prakash Bhau	26	17	43
18	AKN-2016/015	Bhoye Puja Bhaurao	26	17	43
19	AKN-2016/035	Gawali Aditi Datta	22	18	40
20	AKN-2016/040	Jadhav Akshay Subhash	30	16	46
21	AKN-2016/039	Ingle Prasheek Jalindar	30	17	47







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22	AKN-2016/037	Ghughe Sachin Bhagwan	30	17	47
23	AKN-2016/023	Dashpute Swapnil Dashrath	26	18	44
24	AKN-2016/096	Shinde Nisarg Shivnath	26	17	43
25	AKN-2016/028	Dhangar Nilesh Vikas	30	16	46
26	AKN-2016/104	Sonone Manoj Prabhakar	30	16	46
27	AKN/D-2017/014	Mhaisdhune Rohit Pandit	30	18	48
28	AKN-2016/038	Ichche Vishnu Ramdas	26	18	44
29	AKN/D-2017/002	Bacchav Harshad Sunil	26	18	44
30	AKN-2015/021	Desale Prashant Chandrashe	26	17	43
31	AKN/D-2017/003	Chaudhari Rakesh Dinkar	26	17	43
32	AKN/D-2017/007	Ghule Sumit Damodar	26	18	44
33	AKN/D-2017/012	Khandave Prasad Rajaram	26	18	44
34	AKN-2016/098	Shinde Tushar Tanaji	28	17	45
35	AKN/D-2017/020	Shirsath Vikas Bharat	28	16	44
36	AKN-2015/116	Wagh Rushiprasad Shantaram	26	17	43
37	AKN/D-2017/016	Palvi Manish Popat	28	18	46
38	AKN-2016/095	Shinde Mayur Ashok	26	19	45
39	AKN-2016/080	Rakh Suraj Ramrao	28	17	45
40	AKN/D-2017/011	Khalkar Amol Shantaram	26	16	42

Course Coordinator



Principal

**PRINCIPAL**  
K. K. Wagh College of Agriculture  
Saraswati Nagar, Panchavati, Nashik-3





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## Department of Entomology

Certificate course in 'Insect borne diseases in crop and their management'

Academic Year 2019-20

### Report

K. K. Wagh Education Society's K. K. Wagh College of Agriculture, Saraswatinagar, Nashik which provide education in agriculture at U.G. level students. College has to decide introduce new Certificate Course in 'Insect borne diseases in crop and their management'. Total 40 students are enrolled from department of Entomology. Due to this certificate course in 'Insect borne diseases in crop and their management'. Students get more knowledge about different types of insect borne diseases and their effective management.

#### Course outcome

1. Gain awareness of historical and current perspectives of vector.
2. Gain knowledge about different methods of viral diseases management.
3. Acquire knowledge on interaction of virus and vector relationship.
4. Understand the identification of economically importance of viral diseases.
5. Explore Techniques for management of vector.

Students are able to understand methods of viral diseases management and its application in Agriculture. It helps in improve their knowledge about the interaction of virus and vector relationship. Student get understand the symptoms caused by different nematodes which affect the crop growth. Students understand the identification of economically importance of viral diseases and explore different techniques for management of vector. In academic year 2019-20, 40 students are enrolled for this certificate course. Course structure had been divided into theory and theory practical. Theory has 30 marks while practical has 20 marks weightage examination has been conducted for total 50 marks. Duration for this certificate course is 04/02/2020 to 09/02/2020 (Total 36 hrs.). The students who successfully completed the certificate course were given a certificate as appreciation by the college. Course coordinator is Mr. T. B. Ugale and member for this certificate course are, Mr. A.S. Mochi, Miss. K. G. Shete and Mrs. S. K. Ahirrao.

Course Coordinator



Principal  
**PRINCIPAL**  
K. K. Wagh College of Agriculture  
Saraswatinagar, Panchavati, Nashik-3





K K Wagh Education Society's

# K K WAGH COLLEGE OF AGRICULTURE

(Affiliated to Mahatma Phule Krishi Vidyapeeth, Rahuri)

Saraswatinagar, Panchavati, Nashik - 422 003

## Certificate

This is to certify that Mr./Ms. *Shinde Mayur Ashok*.....

Class *Final Year* has completed Certificate Course on *Insect Borm Diseases in*

*Crop & Their Management* from *04/02/2020*..... to *09/02/2020*..... organized by

Department of *Agril. Entomology*..... in academic year *2019-2020*.....

Date : *13 /02/2020*

Place : *Nashik*

  
Course Coordinator

  
Principal  
K K Wagh College of Agriculture  
Nashik