CHAPTER- IV

Data Collection And Analysis

4.1 Introduction

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Data Collection and Analysis

4.1 Introduction:

In this chapter the soil analysis record is present in the form of different types of spore of mycorrhiza. In this the spore from the soil sample of each village photographed and rearranged properly. The different types of arbuscular mycorrhizal spore were noted. Spore of vesicular mycorrhizal fungi also noted from the soil collected from the villages which was selected for this research study. In maximum soil sample mycorrhizal fungi like Glomus, Scutellospora and Gigaspora which shows proper arbuscles.

This chapter also includes the collection of different types of photographs of species from the soil sample collected from the different localities in Shevgaon taluka of Ahmednagar district. It also includes the photographs of root infection of various root samples collected from the ten different villages from Shevgaon taluka. Some of slides show the photographic images of the formation of vesicles and arbuscles in the different roots of various crops like jowar, bajara, cotton, maize and wheat. Comparative value of the spore number and root infection percentage also noted in the form of various graphs and charts.

4.2 Data Collection:

Shevgaon is one of taluka in Ahmednagar district of Maharashtra state. The total land area of shevgoan tehsil is 1031.85 km² (390.40 sqm). In shevgaon tehsil 112 villages are present. Variety of crop plants are under cultivation in these villages. Land area of shevgoan tahasil is divisible as follows.
Table No. 4.1
Land area of shevgoan tehsil is divisible

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Type Of Land</th>
<th>Area (Km2)</th>
<th>% Of Total Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Agriculture</td>
<td>913.19</td>
<td>88.5</td>
</tr>
<tr>
<td>2.</td>
<td>Forest</td>
<td>11.57</td>
<td>1.12</td>
</tr>
<tr>
<td>3.</td>
<td>Other</td>
<td>107.09</td>
<td>10.38</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1031.85</td>
<td>100.00</td>
</tr>
</tbody>
</table>

A) List of the villages in Shevgaon taluka:-

For present research work ten different villages (localities) are selected. These villages are:-

1) Dahigaon ne  
2) Bhavinimgaon  
3) Avhanebudruk  
4) Sultanpur  
5) Waroorbudruk  
6) Khampimpari  
7) Bhatkudgaon  
8) Bodakhe  
9) Salwadgaon  
10) Malegaon

B) List of crops in shevgoan tahasil:-

1) Jowar  
2) Bajara  
3) Whaet  
4) Sugercane  
5) Cotton  
6) Onion  
7) Garlic  
8) Banana  
9) Bringal  
10) Sweet potato  
11) Papaya  
12) Grapes
C) List of the crops selected for study:-

1. Jowar
2. Bajara
3. Wheat
4. Maize
5. Cotton
4.3 Analysis:

Figure No. 4.1 Photograph of vesicles

(Dahigaon-ne crop cotton)

Figure showing the photograph of the vesicles in the root.

1. Collection of the root from cotton field.

2. For study of mycorrhizal infection the roots taken from cotton.

3. Above diagram showing the vesicle formation in root.

4. The vesicle colour is blackish.

5. Shape of the vesicle is circular.

6. All these vesicles show attachment of hyphae.

7. Many vesicles are observed.
Figure No. 4.2 Photograph of vesicle in root

(Bhatkudgaon- crop Maize)

Figure showing the photographic image of vesicle.

1. Above photograph is of vesicle formation in the root.

2. The root samples were collected from jowar field.

3. They are globular in shape.

4. They are black in colour.
Figure No. 4.3 Root infection of mycorrhiza

( Bhatkudgaon – crop Jowar )

Figure showing the photographic image of the VAM fungi in the root cells of Jowar plant.

1. Above figure show the VAM infection in the root cell.

2. For this root taken from jowar crop.

3. Root samples are from Bhatkudgaon village.

4. Bhatkudgaon is one village from the research study.

5. Infection is noted apart from the cellwall.
Figure No. 4.4 Root infection of mycorrhizal fungi

(Bhatkudgaon root sample of maize crop)

Figure Mycorrhizal hyphal colonization in the roots of maize plant.

1. Given figure show the hyphal colonization in root.

2. Such colonization is noted from the maize crop.

3. Hyphae are faint in colour.

4. The roots were collected from the Bhatkudgaon maize field.
Figure No. 4.5 Photograph of root infection

(Sultanpur-jowar root)

Figure showing the photograph of the formation of arbuscles

1. Root infection photographic image of VAM fungi.
2. This image taken from the jowar roots.
3. These arbuscles are with broom like appearance.
4. They show proper attachment of hyphae.
5. For this study the roots were taken from Sultanpur village.
6. Sultanpur is village with maximum jowar cultivation.
Figure No. 4.6 Photograph of hypha and vesicles

(Avhane-budruk crop Wheat)

Figure showing the photograph of the many vesicles

1. Figure shows hypha and vesicles formation.

2. The roots were collected from the Avhane-budruk.

3. Such types of hypha and vesicles observed from the wheat crop.

4. Hyphae are thin and black in colour.

5. Avhane is one village from research study.
Figure No. 4.7 Photograph of Vesicle

(Avhane- Budruk crop Jowar)

Figure showing the structure of vesicle in the root of jowar.

1. This is photograph of VAM vesicle.

2. This root samples brought from Ranubai shivar from Avhane.

3. These vesicles are with distinct oil globules.

4. These root samples are taken from Jowar crop.

5. These vesicles are black colour.
Figure No. 4.8 Root infection photograph-
(Dahigaon-ne- Jowar crop)

Figure showing the root infection of mycorrhizal fungi with intracellular hyphae.

1. Figure show infection of mycorrhizal fungi in root.
2. Root infection noted in jowar roots.
3. Roots collected from Dahigaon-ne village.
4. Hyphae branching with entangled nature.
5. In this intracellular hyphal growth is present.
Figure No. 4.9 Root infection photograph

(Bhavinimgaon- Jowar crop)

Figures showing the root infection of mycorrhizal fungi in the roots of jowar.

1. Root infection of VAM fungi noted.
2. This mycorrhizal infection is observed from the crop jowar.
3. This image of VAM infection obtained from Bhavinimgaon.
4. Bhavinimgaon is village which is with full of water fasicity.
5. In this village jowar cultivation is very less.
6. Root cell show penetration of mycorrhiza.
Figure No. 4.10 Root infection photograph
(Salwadgaon- Jowar crop)

Figure showing the root infection of VAM fungi in the roots of jowar.

1. Photoplate show mycorrhizal infection in roots.
2. This type of infection observed in roots of jowar crop.
3. This mycorrhizal photograph obtained from the Sultanpur.
4. Photograph show penetration of hyphae in root cell.
5. Sultanpur village is place where more cultivation of jowar.
Figure No. 4.11 Root infection photograph

(Avhane-Budruk- crop Jowar)

Figure showing infection of VAM fungi in the roots of jowar.

1. Mycorrhizal infection from jowar recorded.

2. This infection noted in root of jowar in Avhane budruk.

3. In this phograph the cell wall observed thin.

4. In above photoplate four cells observed.

5. All four cells show different developmental stage of growth.

6. In above figure three cells showing hyphae distinct.
Figure No. 4.12 Root infection photograph
(Sultanpur-Crop-Jowar)

Figure showing infection of VAM fungi in jowar roots.

1. Photograph is of VAM infection in jowar roots.

2. The cell wall of infected cell is thin.

3. Each cell from above photograph show penetration of mycorrhizal hyphae.

4. This image is obtained from the Sultanpur.

5. Sultanpur is one research village from ten villages.
Figure No. 4.13 Photograph of VAM of Jowar

(Avhane-Budruk)

Figure showing the photograph of vesicle of VAM of jowar roots.

1. This photograph is obtained from the jowar root.

2. For this study roots were taken from the jowar field of Avhane.

3. The vesicles are somewhat oblong in shape.

4. Avhane budruk is village with seasonal crop cultivation.

5. The wall of vesicle is thick in nature.
Figure No. 4.14 Spore photograph

(Avhane-Budruk crop jowar)

Figures showing the photograph of VAM spore of Glomus sp.

1. Above photograph is of mycorrhizal fungi - Glomus species.

2. These spore collected from the jowar crop field.

3. The spore wall is thick in nature.

4. They are red in colour.

5. They show hyphal attachment.

6. The soil was collected from the Avhane village.
Figure No. 4.15 Photograph of VAM vesicles

(Bhatkudgaon- Maize crop)

Figure showing the structure of vesicle of VAM fungi.

1. Vesicle is of VAM fungi from the maize crop.
2. For this roots were collected from maize crop field.
3. These roots were collected from the Bhatkudgaon village.
4. These vesicles are with lateral hyphal attachment.
5. These vesicles show elongated shape.
Figure No. 4.16 Photograph of VAM vesicles

(Waroor-Budruk Jowar crop)

Figure showing the photograph of the vesicle of VAM fungi.

1. This is photograph of VAM vesicle.

2. They are with black colour and thick wall.

3. Hyphal attachment is distinctly visible.

4. Arround the vesicle many hyphae are present.

5. These root samples were collected from the jowar from Waroor.
Figure No. 4.17 VAM vesicle photograph

(Malegaon- crop Jowar)

Figure Showing vesicle photograph of VAM fungi with egg-shaped vesicle.

1. Vesicles are egg-shaped.
2. They show hyphae attached at one side.
3. These roots were collected from the Malegaon.
4. These are blackish in colour.
Figure No. 4.18 VAM vesicle photograph

(Khampimpri - Jowar Crop)

Figure showing the photograph of the vesicle of VAM fungi with lateral attachment of hyphae.

1. These VAM vesicles show hyphae attached to one side.

2. Lateral hyphal attachment is noted.

3. The roots were collected from Khampimpri.

4. These roots were taken from the jowar crop field.

5. Khampimpri is one of the village from research study area.
Figure No. 4.19 Mycorrhiza Spores photograph

(Bodakhe-crop Jowar)

Figure showing the spore photograph of species of mycorrhiza, *Glomus citricola*

1. This mycorrhizal spore from *Glomus citricola*.

2. The wall of spore is thick and brown in colour.

3. Attachment of branched hyphae is observed.

4. The spores were collected from the Bodakhe jowar field.

5. Area towards inner side of spore wall is yellow.
Figure No. 4.20 Mycorrhiza spore photograph

(Avhane-Budruk crop Jowar)

Figure showing the photograph of *Glomus geosporum*.

1. This above spore is from *G. geosporum*.

2. These spores obtained from soil from jowar crop.

3. The soil for spore study brought from Avhane budruk.

4. The place ranubai field is used for jowar cultivation.

5. The shape of spore is circular.

6. Outer wall of spore is dark black and thick.
Figure No. 4.21 Spore photograph
(Bhatkudgaon- Jowar Crop)

Figure Spore photograph of *Glomus ausirale*

1. The spore from mycorrhizal fungi *Glomus ausirale*.
2. The wall of spore is punctured from one side.
3. Wall of spore is thin and distinct separation.
4. Hyphal attachment is noticed from the middle portion.
5. There is difference in colour of hyphae and spore wall.
6. The soil was collected from jowar crop field.
7. This spore obtained from the Bhatkudgaon.
Figure No. 4.22 Mycorrhizal spore photograph

(Malegaon- crop –Maize)

Figure VAM spore of species *Glomus halon*.

1. This photograph from *Glomus halon*.

2. Sporewall is punctured from one side.

3. Small hyphal attachment is also noted.

4. Colour of spore is brown.

5. The soil taken from Malegaon village from Shevgaon taluka.

6. Soil was collected from maize crop field.
1. Given spore photographic image is *Glomus mosseae*.

2. In this spore sporewall is punctured at many places.

3. Colour of the spore is brown.

4. The wall of spore show extension of hyphae.

5. The soil was taken from the village Sultanpur.
Figure Spore photograph of *Glomus multicaule*

1. Spore image is from *Glomus multicaule*.
2. The shape of spore somewhat top shaped.
3. From one pointed end hyphal attachment is present.
4. For the study soil taken from Waroor village.
5. The soil was from maize crop field.
1. The photographic image is from *Gigaspora decipen*.
2. For this research study the soil was taken from Bhatkudgaon village.
3. The spore wall show cylindrical elongated process from one side.
4. The soil taken from field of jowar crop.
Figure No. 4.26 Mycorrhiza spore photograph

(Avbane-Budruk crop Wheat)

Figure showing the spore photograph of *Glomus* species.

1. This mycorrhiza spore from *Glomus* species.

2. The wall spore show many ridges.

3. One elongated process is observed from one side.

4. For this the soil was from Avhane budruk.

5. The colour of spore brown and somewhat circular shape.
Figure No. 4.27 Mycorrhiza spore photograph

(Waroor-Budruk Jowar crop)

Figure Mycorrhiza spore photograph of *Glomus tenebrosum*

1. Above spore is from *Glomus tenebrosum*.
2. Soil was obtained from Waroor budruk.
3. In this sporewall is punctured.
4. The samples of soil taken from the jowar field.
5. The spore wall shows hyphal attachment from one side.
1. Given mycorrhizal spore of *Sclerocystis* species.

2. Colour of mycorrhiza spore is black.

3. Soil samples were taken from the Bhatkudgaon village soil.

4. The soil was from jowar crop field.

5. These spores show hyphal attachment from sides.

6. In *Sclerocystis* mycorrhiza the hyphae are thin in nature.
Figure showing the spore photograph of *Scutellospra auriglobosa*.

1. The photographic image of spore of *Scutellospra auriglobosa*.

2. Shape of this spore is like top-shaped.

3. Soil was taken from locality Sultanpur village.


5. The samples of soil collected from locality of jowar crop of Sultanpur.

6. Rhizospheric soil from this village shows such types of spores.
Figure No. 4.30 Spore photograph of mycorrhiza
(Salwadgaon-Jowar crop)

Figure showing the photograph of mycorrhiza species *Glomus tenebrosum*.

1. The photograph of VAM species *Glomus tenebrosum*.
2. This spore is with tuberculate process.
3. Distinct sporewall is visible.
4. Colour and shape of spore brown and circular respectively.
5. These spores from rhizospheric soil of jowar field.
6. Samples of from Salwadgaon village.
Figure No. 4.31 Mycorrhiza spore photograph

(Avhane-Budruk-Jowar Crop)

Figure showing the spore photograph of mycorrhizal spore of species *Glomus multicaule*.

1. The above photograph is of *Glomus multicaule*.

2. The sporewall is punctured from two ends.

3. Well attachment of hyphae is present.

4. Circular shape and brown colour is visible.

5. The soil samples were collected from the village Avhane.

6. These spores are from jowar crop field.
Figure No. 4.32  Spore photograph

(Bhatkudgaon- Jowar crop)

Figure showing the spore photograph of mycorrhiza species *Glomus microcarcum*.

1. Spore photograph of VAM fungi *Glomus microcarcum*.

2. This image taken from Rhizospheric soil of Bhatkudgaon.

3. Soil from jowar crop field is used.

4. In this spore noticable sporewall is present.
Figure No. 4.33 Mycorrhiza spore photograph

(Sultanpur-Maize crop)

Figure Photoplate showing the spore photograph of mycorrhiza sp. *Scutelleospora fasiculatum* from Sultanpur Village.

1. The given spore from mycorrhiza *Glomus microcarcum*.

2. Sporewall from these spore dark brown.


4. For this soil was taken from maize crop field.

5. Soil from Sultanpur from Shevgaon taken.
Figure No. 4.34 Spore photograph

(Bodakhe-Maize crop)

Figure Spore photograph of *Scutelleospora* sp.

1. This image is from *Scutelleospora* sp.

2. The spore obtained from maize crop field.

3. The soil samples taken from Bodakhe village.
Figure No. 4.35 Mycorrhiza spore photograph

(Khampimpri- Maize crop)

Figure showing the spore from the soil sample collected from Khampimpri village from Shevgaon taluka. The spore *Scutelleospora* sp. with indistinct hyphal attachment.

1. Rhizospheric soil from Khampimpri show above spore.

2. The above mycorrhizal spore from *Scutelleospora* fungi.

3. Somewhat brown-black colour is present.

4. Maize crop rhizospheric soil is used.
Figure No. 4.36 Spore photograph
(Bhatkudgaon- Wheat crop)

Figure showing the photograph of *Scutelleospora auriglobossa* with lateral germination. The soil were collected from the village Bhatkudgaon.

1. Spore from soil Bhatkudgaon wheat crop.
2. Flat hyphal attachment is observed.
3. Circular shape and yellowish colour noted.
4. The spore of *Scutelleospora auriglobossa*. 
Figure No. 4.37 Spore photograph of mycorrhiza

(Bhavinimgaon-Wheat crop)

Figure showing the photograph of spore of mycorrhiza species *Scutelleospora calospora* from the soil sample taken from village-Bhavinimgaon from the Shevgaon taluka.

1. The above given spore image is of sp. *Scutelleospora calospora*.

2. In this spore branched hyphae is observed.

3. Rhizospheric samples of soil used from Bhavinimgaon.

4. Wheat crop from above village soil used.

5. This spore are with punctured wall.
Figure showing the spore photograph of mycorrhiza species *Scutelleospora gilmorei*. The spore shows varying germination shields.

1. This spore is from *Scutelleospora gilmorei*.

2. In this collected spore many germination shields noted.

3. Short hyphal attachment is observed.

4. Yellowish brown colour is present.
Figure No. 4.39 Spore photograph of mycorrhiza

(Sultanpur- jowar crop)

Figure showing the photograph of mycorrhiza species *Scutelleospora fasciculatum*.

1. Given image from *Scutelleospora fasciculatum spore*.
2. Single common hypha attached to each spore.
3. for this study Sultanpur village soil used.
4. These spores were obtained from jowar field.
Figure showing the spore of mycorrhiza species *Scutelleospora fasciculatum* from the soil samples collected from village Avhane-Budruk. The spore characterised by the presence of multibranched hyphae.

1. The image is of *Scutelleospora fasciculatum*.

2. These spores obtained from Avhane.

3. Tree branching is noted here.

4. The spore with distinct sporewall is noted.

5. This image from jowar crop field.
Figure showing the spore photograph of mycorrhiza species *Scutelleospora fasiculatum* from rhizospheric soil of jowar from the Waroor village.

1. The rhizospheric soil of Waroor is used.
2. Total five branches of hyphae are visible.
3. from these five only one branch show spore attachment.
4. Spore with many shields noted.
5. Jowar crop rhizospheric soil is used.
Figure No. 4.42 Spore photograph

(Avhane-Budruk jowar crop)

Figure showing the spore diagram from the species of mycorrhiza Scutelleospora minuta. The soil sample from the jowar field of village Avhane -Budruk Shevgaontaluka.

1. This is photograph of *Scutelleospora minuta*.

2. The rhizospheric samples of soil from Jowar of Avhane.

3. This spore show thick peripheral wall with brown colour.

4. To this spore elongated hyphal attachment is present.
Figure showing the spore photograph of mycorrhiza spore of species, *Scutelleospora fasiculatum* with hyphal attachment. The soil samples were collected from the Waroor from Maize field.

1. *Scutelleospora fasiculatum* spore is in above diagram.

2. Spore is with many shields and thick wall.

3. This soil was taken from the Waroor village from Shevgaon.

4. The soil collected from the maize crop field.
Figure No. 4.44 Mycorrhiza spore photograph
(Salwadgaon- Jowar crop)

Figure showing the spore photograph of *Scutelleospora fasiculatum* from the rhizospheric soil of Salwadgaon from the Shevgaon taluka.

1. for the study of this fungi soil taken from Salwadgaon.
2. The given spore of VAM fungi *Scutelleospora fasiculatum*.
3. Many spores with branched hyphae observed.
4. Jowar crop rhizospheric soil used.
Figure showing the diagram of the spore of species *Glomus multicaule* with striation on wall. The spore photograph taken from the rhizospheric soil of Dahigaon-ne.

1. Given spore is of *Glomus multicaule* sp. of mycorrhiza.
2. This spore shows many striations on wall.
3. Special thickening is visible on sporewall.
4. Attachment of hyphae at one end.
Figure No. 4.46 Mycorrhiza spore photograph

(Sultanpur-Jowar crop)

Figure showing the spore of Mycorrhiza *Scutelliospora* sp. With single large and many smaller shields. The spore photograph is taken from the rhizospheric soil which was collected from the Sultanpur village.

1. The spore photograph with many shields.

2. Sultanpur village soil is used for this study.

3. The above given spore from species *Scutelliospora*.

4. Distinct peripheral wall in spore is present.
Figure showing the mycorrhizal spore photograph of mycorrhiza species- \textit{Scutelliospora}. The spore photograph shows distinct two longitudinal and two horizontal shields. The spore photograph obtained from rhizospheric soil of jowar crop of Waroor-budruk village.

1. In above spore both longitudinal and horizontal shield noted.

2. This is spore of mycorrhizal species- \textit{Scutelliospora}.

3. Soil was taken from Jowar crop of Waroor village.
Figure No. 4.48 Mycorrhiza spore photograph

(Avhane-budruk – Jowar crop)

Figure showing the photograph of mycorrhizal spore of species-Scutelliospora. The spore shows two distinct longitudinal shields. The collection of spore photograph is from the rhizospheric soil of village-Avhane-budruk.

1. In this only longitudinal shields are noted.

2. This is spore of VAM speciesScutelliospora.

3. For this soil samples were taken from the Avhanebudruk.
Figure No. 4.49 Mycorrhiza spore photograph

(Malegaon- Jowar crop)

Figure showing the photograph of spore Scutelliospora sp. From the rhizospheric soil of Malegaon village.

1. The spore shows distinct outer and inner wall.

2. Colour of spore is yellow.

3. But hyphal colour is somewhat faint.

4. Rhizo. Soil was taken from Malegaon.
Figure No. 4.50 Mycorrhizal spore photograph

(Salwadgaon- Jowar crop)

Figure showing the photograph of *Scutelliospora* mycorrhiza species from the soil Salwadgaon Soil of jowar crop.

1. The photograph is of *Scutelliospora* mycorrhiza.

2. Collection of this fungus from Salwadgaon.

3. These spore collected from jowar field of Salwadgaon.
Figure No. 4.51 Mycorrhiza spore photograph

(Avhane-budruk- Maize crop)

Figure showing the spore photograph of mycorrhizal fungi-Scutelliospora from the rhizospheric soil of maize crop from the village Avhane – budruk.

1. Common hyphae show three branches with spores.

2. Each sporewall show many shields.

3. The shape of spore is somewhat circular and almond shaped.

4. These spores were collected from Avhane from Shevgaon.
Figure No. 4.52 Mycorrhiza spore photograph

(Malegaon- Jowar crop)

Figure showing the spore photograph of *Glomus tenebrosum*. The spore photograph is in young condition stage.

1. This photograph of spore is in early developmental stage.

2. This image is from *Glomus tenebrosum* fungi.

3. The soil samples from Malegaon village of Shevgaon taluka.
Figure showing the photographic image of the mycorrhizal fungi of species *Scutelliospora minuta*. The spore photograph is obtained from the rhizospheric soil of Bhatkudgaon village.

1. Spore image of *Scutelliospora minuta* mycorrhiza.

2. Elongated hypha with thick sporewall is noted.

3. For the above study Bhatkudgaon soil from maize field is used.
Figure No. 4.54 Mycorrhizal root infection photograph

(Root sample from- Salwadgaon, Jowar crop)

Figure showing the hyphal growth of mycorrhiza fungi. The photograph obtained from root samples collected from the Salwadgaon village.

1. Given diagram is of root infection of VAM fungi.
2. The roots were taken from the village salwadgaon.
3. Many entangled hyphae observed in above photograph.
4. These roots were taken from the jowar field.
Figure No. 4.55 Mycorrhizal root infection photograph  
(Root infection of mycorrhiza from – Salwadaon.)

![Photograph of mycorrhizal root infection]

Figure showing the photographic image mycorrhizal hyphae which penetrate into the roots of Maize crop.  
1. This root infection photograph obtained from the maize roots.  
2. In this root penetration of mycorrhizal fungi is observed.  
3. These roots were obtained from Salwadaon maize field.  
4. Staining properly shows penetration of mycorrhiza.
Figure showing the photographic image of the hyphae in roots of wheat crop. The photographic image obtained from the roots of wheat crop from the village Avhane-budruk.

1. The above photograph taken from Avhanebudruk.
2. Within the root cell root infection is noted.
3. These roots were from the wheat crop.
Figure No. 4.57 Mycorrhizal root infection photograph

(Root infection of mycorrhizal fungi- Sultanpur.)

Figure showing the photograph of Hyphal attachment in the root cell. The photograph obtained from the root samples collected from the village- Sultanpur of wheat crop.

1. The above photographic images were obtained from Wheat roots.
2. The soil was collected from village Sultanpur from Shevgaon.
3. The infection of VAM fungi is distinctly observed.
Figure No. 4.58  Mycorrhizal root infection photograph
(Root infection of Mycorrhiza- Khampimpri.)

Figure showing the photograph of extramatrical mycelium of mycorrhizal fungi. The root samples collected from the jowar crop from the village- Khampimpri.

1. Photograph obtained from the root Jowar roots.
2. The roots were from Khampimpri of Shevgaon taluka.
3. In above image extramatrical mycelia growth of fungi is noted.
Graph No. 4.1

Number of spores / 50 gm of soil with respect to crop(Dahigaon Ne)

X axis – crop
Y axis – number of Spores

Graph showing the detail of number of spores per 50 gm of rhizospheric soil which is collected from the roots of each crop from village- Dahigaon-ne. The number of range of spores in soil found 3-7 only.
Graph No. 4.2
Number of spores / 50 gm of soil with respect to crop (Bhavinimgaon)

X axis – crop
Y axis – number of spores

Graph showing the number of mycorrhizal fungi spores in 50 gm of rhizospheric soil collected from roots of village- Bhavinimgaon. The range of spores found in the soil is 4-7 only.
Graph No. 4.3

Number of spores/50 gm of soil with respect to crop (AvhaneBudruk)

X axis – crops
Y axis – number of spores

Graph showing the number of spores per 50 gm of soil collected from the rhizospheric region of the crops selected for research study from the village- Avhane-Budruk, from Shevgaon. The number of spore range found is 23-30.
Graph showing the number of spore count per 50 gm of rhizospheric soil from the soil collected from roots of different plants selected for study form village- Sultanpur. The spore number ranges from 23-29.
Graph No. 4.5

Number of spores/50 gm of soil with respect to crop (Waroor Budruk)

X axis – crops.
Y axis – number of spores.

Graph showing the spore number per 50 gm of soil from the rhizospheric soil from crops selected for research study from village-Waroor budruk. The spore range found from 24-27.
Graph showing the number of spore per 50 gm of soil from the rhizospheric soil collected from the different crop plants selected for the research study from the village- Khampimpri, from Shevgaon taluka. Spore number ranges from 07-12.
Graph No. 4.7
Number of spores/ 50 gm of soil with respect to crops (Bhatkudgaon)

X- axis- crops

Y- axis- Number of spores.

Graph Showing the spore number per 50 gm of soil collected from the rhizospheric region of the crops selected for the study from the village-Bhatkudgaon, from the Shevgaon taluka. The spore number range found from 19-30.
Graph No. 4.8
Number of spores/50 gm of soil with respect to crop (Bodakhe)

X axis – crops

Y axis – number of spores

Graph Showing the values/ number of spores per 50 gm of soil from the rhizospheric region of the crops selected for study from the village- Bodakhe. in Shevgaon taluka. The spore number ranges from 06-11.
Graph No. 4.9
Number of spore/50 gm of soil with respect to crops (Salwadgaon)

X- axis- Crops
Y- axis- No. of spores.

Graph Showing the number of spores per 50 gm of soil collected from the rhizospheric area of crops selected from the village-Salwadgaon from Shevgaon taluka. The spore number ranges from 23-30.
Graph No. 4.10

Number of spores / 50 gm of soil with respect to crop (Malegaon)

X axis – crops
Y axis – Number of spores

Graph Showing the number spores found in per 50 gm of soil from the rhizospheric soil which is collected from the roots of the crop selected for the study from village- Malegaon, from Shevgaon taluka. The spore number count ranges from 24-30.
Table No. 4.2
Soil Analysis for NPK

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Locality</th>
<th>N(Kg/hect)</th>
<th>P(Kg/hect)</th>
<th>K(Kg/hect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Dahigaon-ne</td>
<td>280</td>
<td>4.84</td>
<td>369.6</td>
</tr>
<tr>
<td>2.</td>
<td>Bhavinimgaon</td>
<td>220</td>
<td>0.57</td>
<td>526.4</td>
</tr>
<tr>
<td>3.</td>
<td>AvhaneBudruk</td>
<td>220</td>
<td>0.85</td>
<td>470.4</td>
</tr>
<tr>
<td>4.</td>
<td>Sultanpur</td>
<td>220</td>
<td>0.57</td>
<td>347.2</td>
</tr>
<tr>
<td>5.</td>
<td>WaroorBudruk</td>
<td>180</td>
<td>0.57</td>
<td>504</td>
</tr>
<tr>
<td>6.</td>
<td>Khampimpri</td>
<td>180</td>
<td>0.28</td>
<td>537.6</td>
</tr>
<tr>
<td>7.</td>
<td>Bhatkudgaon</td>
<td>180</td>
<td>0.28</td>
<td>392</td>
</tr>
<tr>
<td>8.</td>
<td>Bodakhe</td>
<td>220</td>
<td>0.57</td>
<td>398.4</td>
</tr>
<tr>
<td>9.</td>
<td>Salwadgaon</td>
<td>180</td>
<td>0.57</td>
<td>459.2</td>
</tr>
<tr>
<td>10.</td>
<td>Malegaon</td>
<td>220</td>
<td>0.28</td>
<td>425.6</td>
</tr>
</tbody>
</table>

Table showing the values of nitrogen, phosphorus and potassium from the soil samples collected from the ten villages from Shevgaon taluka. These values are kg/hect.
Table No. 4.3
Soil Analysis for Organic carbon

<table>
<thead>
<tr>
<th>Sr. Number</th>
<th>Locality</th>
<th>Organic carbon (Kg/hect)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dahigaon-ne</td>
<td>0.42</td>
</tr>
<tr>
<td>2</td>
<td>Bhavinimagon</td>
<td>0.20</td>
</tr>
<tr>
<td>3</td>
<td>AvhaneBudruk</td>
<td>0.29</td>
</tr>
<tr>
<td>4</td>
<td>Sultanpur</td>
<td>0.23</td>
</tr>
<tr>
<td>5</td>
<td>WaroorBudruk</td>
<td>0.14</td>
</tr>
<tr>
<td>6</td>
<td>Khampimpri</td>
<td>0.17</td>
</tr>
<tr>
<td>7</td>
<td>Bhatkudgaon</td>
<td>0.12</td>
</tr>
<tr>
<td>8</td>
<td>Bodakhe</td>
<td>0.23</td>
</tr>
<tr>
<td>9</td>
<td>Salwadgaon</td>
<td>0.18</td>
</tr>
<tr>
<td>10</td>
<td>Malegaon</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Table Showing the values obtained from soil analysis for organic carbon in ten different villages soil samples which are selected for research study.
Table No. 4.4
Spore count in different localities with respect to crop – Jowar

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Locality</th>
<th>Number of spores/50 gm of soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dahigaon-ne</td>
<td>07</td>
</tr>
<tr>
<td>2</td>
<td>Bhavinimgaon</td>
<td>06</td>
</tr>
<tr>
<td>3</td>
<td>AvhaneBudruk</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>Sultanpur</td>
<td>23</td>
</tr>
<tr>
<td>5</td>
<td>WaroorBudruk</td>
<td>24</td>
</tr>
<tr>
<td>6</td>
<td>Khampimpri</td>
<td>11</td>
</tr>
<tr>
<td>7</td>
<td>Bhatkudgaon</td>
<td>19</td>
</tr>
<tr>
<td>8</td>
<td>Bodakhe</td>
<td>06</td>
</tr>
<tr>
<td>9</td>
<td>Salwadgaon</td>
<td>23</td>
</tr>
<tr>
<td>10</td>
<td>Malegaon</td>
<td>28</td>
</tr>
</tbody>
</table>

Table Showing the spore count values of mycorhuza from the rhizospheric soil sample collected from the crop Jowar from ten different villages from the Shevgaon taluka.
Table No. 4.5
Spore count in different localities with respect to crop – Bajara

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Locality</th>
<th>Number of spores/50 gm of soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dahigaon-ne</td>
<td>05</td>
</tr>
<tr>
<td>2</td>
<td>Bhavinimgaon</td>
<td>04</td>
</tr>
<tr>
<td>3</td>
<td>AvhaneBudruk</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>Sultanpur</td>
<td>23</td>
</tr>
<tr>
<td>5</td>
<td>WaroorBudruk</td>
<td>27</td>
</tr>
<tr>
<td>6</td>
<td>Khampimpri</td>
<td>09</td>
</tr>
<tr>
<td>7</td>
<td>Bhatkudgaon</td>
<td>21</td>
</tr>
<tr>
<td>8</td>
<td>Bodakhe</td>
<td>07</td>
</tr>
<tr>
<td>9</td>
<td>Salwadgaon</td>
<td>26</td>
</tr>
<tr>
<td>10</td>
<td>Malegaon</td>
<td>28</td>
</tr>
</tbody>
</table>

Table Showing the spore count of the mycorrhiza spores with respect to the crop- Bajara from the ten different villages selected for study from Shevgaon taluka.
Table No. 4.6
Spore count in different localities with respect to crop – Wheat

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Locality</th>
<th>Number of spores/50 gm of soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dahigaon-ne</td>
<td>04</td>
</tr>
<tr>
<td>2</td>
<td>Bhavinimgaon</td>
<td>05</td>
</tr>
<tr>
<td>3</td>
<td>AvhaneBudruk</td>
<td>23</td>
</tr>
<tr>
<td>4</td>
<td>Sultanpur</td>
<td>26</td>
</tr>
<tr>
<td>5</td>
<td>WaroorBudruk</td>
<td>27</td>
</tr>
<tr>
<td>6</td>
<td>Khampimpri</td>
<td>07</td>
</tr>
<tr>
<td>7</td>
<td>Bhatkudgaon</td>
<td>25</td>
</tr>
<tr>
<td>8</td>
<td>Bodakhe</td>
<td>08</td>
</tr>
<tr>
<td>9</td>
<td>Salwadgaon</td>
<td>26</td>
</tr>
<tr>
<td>10</td>
<td>Malegaon</td>
<td>29</td>
</tr>
</tbody>
</table>

Table showing the values of spore count of mycorrhiza spores with respect to the crop – Wheat from the ten different villages from Shevgaon taluka.
Table No. 4.7
Spore count in different localities with respect to crop – Maize

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Locality</th>
<th>Number of spores/50 gm of soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dahigaon-ne</td>
<td>06</td>
</tr>
<tr>
<td>2</td>
<td>Bhavinimgaon</td>
<td>07</td>
</tr>
<tr>
<td>3</td>
<td>AvhaneBudruk</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>Sultanpur</td>
<td>29</td>
</tr>
<tr>
<td>5</td>
<td>WaroorBudruk</td>
<td>27</td>
</tr>
<tr>
<td>6</td>
<td>Khampimpri</td>
<td>09</td>
</tr>
<tr>
<td>7</td>
<td>Bhatkudgaon</td>
<td>29</td>
</tr>
<tr>
<td>8</td>
<td>Bodakhe</td>
<td>07</td>
</tr>
<tr>
<td>9</td>
<td>Salwadgaon</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>Malegaon</td>
<td>29</td>
</tr>
</tbody>
</table>

Table showing the number of mycorrhizal spores per 50 gm of rhizospheric soil collected from the crop- Maize, from ten different villages from Shevgaon taluka.
Table No. 4.8

Spore count in different localities with respect to crop- Cotton.

<table>
<thead>
<tr>
<th>Sr. Number</th>
<th>Locality</th>
<th>Number of spore/50gm soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dahigaon-ne</td>
<td>03</td>
</tr>
<tr>
<td>2</td>
<td>Bhavinimgaon</td>
<td>06</td>
</tr>
<tr>
<td>3</td>
<td>AvhaneBudruk</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>Sultanpur</td>
<td>29</td>
</tr>
<tr>
<td>5</td>
<td>WaroorBudruk</td>
<td>26</td>
</tr>
<tr>
<td>6</td>
<td>Khampimpri</td>
<td>12</td>
</tr>
<tr>
<td>7</td>
<td>Bhatkudgaon</td>
<td>30</td>
</tr>
<tr>
<td>8</td>
<td>Bodakhe</td>
<td>11</td>
</tr>
<tr>
<td>9</td>
<td>Salwadgaon</td>
<td>27</td>
</tr>
<tr>
<td>10</td>
<td>Malegaon</td>
<td>30</td>
</tr>
</tbody>
</table>

Table Showing number of mycorrhiza spores from the rhizospheric soil of crop- Cotton from ten different villages from Shevgaon taluka.
Table No. 4.9

Percentile root infectivity- Dahigaon-ne.

<table>
<thead>
<tr>
<th>Sr. Number</th>
<th>Crops</th>
<th>% root infectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jowar</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Bajara</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>Wheat</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>Maize</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Cotton</td>
<td>20</td>
</tr>
</tbody>
</table>

Table showing the percentage of root infectivity of mycorrhiza in five different crops with respect to the village-Dahigaon-ne, from Shevgaon taluka. The range of root infectivity found, 20-30 % only.
Graph showing the percentile root infectivity with respect to the roots collected from the five different crops selected for research study from the village- Dahigaon-ne, from Shevgaon taluka.
Table No. 4.10

Percentile root infectivity - Bhavinimgaon.

<table>
<thead>
<tr>
<th>Sr. Number</th>
<th>Crops</th>
<th>% root infectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jowar</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>Bajara</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>Wheat</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Maize</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Cotton</td>
<td>20</td>
</tr>
</tbody>
</table>

Table showing the percentage of root infectivity of mycorrhiza in five different crops with respect to the village - Bhavinimgaon, from Shevgaon taluka. The range of root infectivity found, 20-30 % only.
Graph No. 4.12

% Root infectivity with respect to crops (Bhavinimgaon)

X axis – crops
Y axis - % root infectivity

Graph showing the percentile root infectivity of mycorrhizal fungi with respect to the five different crops selected for the research study from the village- Bhavinimgaon, from Shevgaon taluka.
Table No. 4.11

Percentile root infectivity- Avhane-Budruk

<table>
<thead>
<tr>
<th>Sr. Number</th>
<th>Crops</th>
<th>% root infectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jowar</td>
<td>80</td>
</tr>
<tr>
<td>2</td>
<td>Bajara</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>Wheat</td>
<td>60</td>
</tr>
<tr>
<td>4</td>
<td>Maize</td>
<td>60</td>
</tr>
<tr>
<td>5</td>
<td>Cotton</td>
<td>70</td>
</tr>
</tbody>
</table>

Table showing the percentage of root infectivity of mycorrhiza in five different crops with respect to the village- Avhane-Budruk, from Shevgaon taluka. The range of root infectivity found, 60-80 % only.
Graph No. 4.13

% root infectivity with respect to crop (Avhane Budruk)

X axis - crops
Y axis - % root infectivity

Graph showing the percentile root infectivity of mycorrhizal fungi with respect to the roots collected from the five different crops from the village- Avhane-Budruk, from the Shevgaon taluka.
Table No. 4.12

Percentile root infectivity- Sultanpur

<table>
<thead>
<tr>
<th>Sr. Number</th>
<th>Crops</th>
<th>% root infectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jowar</td>
<td>90</td>
</tr>
<tr>
<td>2</td>
<td>Bajara</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>Wheat</td>
<td>70</td>
</tr>
<tr>
<td>4</td>
<td>Maize</td>
<td>60</td>
</tr>
<tr>
<td>5</td>
<td>Cotton</td>
<td>60</td>
</tr>
</tbody>
</table>

Table showing the percentage of root infectivity of mycorrhiza in five different crops with respect to the village- Sultanpur, from Shevgaon taluka. The range of root infectivity found, 60-90 % only.
Graph No. 4.14

% root infectivity with respect to crop (Sultanpur)

X axis – crops
Y axis - % root infectivity

Graph showing the percentage of root infectivity of mycorrhizal fungi with respect to the roots collected from the five different crops from the village selected for the study- Sultanpur, from Shevgaon taluka.
Table No. 4.13

Percentile root infectivity- Waroor- Budruk

<table>
<thead>
<tr>
<th>Sr. Number</th>
<th>Crops</th>
<th>% root infectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jowar</td>
<td>80</td>
</tr>
<tr>
<td>2</td>
<td>Bajara</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>Wheat</td>
<td>70</td>
</tr>
<tr>
<td>4</td>
<td>Maize</td>
<td>70</td>
</tr>
<tr>
<td>5</td>
<td>Cotton</td>
<td>60</td>
</tr>
</tbody>
</table>

Table showing the percentage of root infectivity of mycorrhiza in five different crops with respect to the village- Waroor-Budruk, from Shevgaon taluka. The range of root infectivity found, 60-80 % only.
Graph showing the percentile root infectivity of mycorrhizal fungi with respect to the root sample collected from five different crops for research study from the village – Warror-Budruk, from Shevgaon taluka.
Table No. 4.14

Percentile root infectivity- Khampimpri.

<table>
<thead>
<tr>
<th>Sr. Number</th>
<th>Crops</th>
<th>% root infectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jowar</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>Bajara</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>Wheat</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>Maize</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>Cotton</td>
<td>30</td>
</tr>
</tbody>
</table>

Table Showing the percentage of root infectivity of mycorrhiza in five different crops with respect to the village- Khampimpri, from Shevgaon taluka. The range of root infectivity found, 30-40 % only.
Graph No. 4.16
Percentile root infectivity with respect to crops (Khampimpri)

X-axis: Crops
Y-axis: % root infectivity

Graph Showing the percentile root infectivity of mycorrhizal fungi in the roots of five different crop plants which were selected for research study from the village Khampimpri, from Shevgaon taluka.
Table No. 4.15

Percentile root infectivity- Bhatkudgaon.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Crops</th>
<th>% root infectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jowar</td>
<td>90</td>
</tr>
<tr>
<td>2</td>
<td>Bajara</td>
<td>70</td>
</tr>
<tr>
<td>3</td>
<td>Wheat</td>
<td>70</td>
</tr>
<tr>
<td>4</td>
<td>Maize</td>
<td>60</td>
</tr>
<tr>
<td>5</td>
<td>Cotton</td>
<td>70</td>
</tr>
</tbody>
</table>

Table showing the percentage of root infectivity of mycorrhiza in five different crops with respect to the village- Bhatkudgaon, from Shevgaon taluka. The range of root infectivity found, 60-90 % only.
Graph No. 4.17
Percentile root infectivity with respect to crops (Bhatkudgaon)

X-axis: Crops
Y-axis: % root infectivity

Graph showing the root infectivity percentage of mycorrhizal fungi with respect to the roots collected from five crops which are selected for study from the village - Bhatkudgaon, from Shevgaon taluka.
Table No. 4.16

Percentile root infectivity- Bodakhe

<table>
<thead>
<tr>
<th>Sr. Number</th>
<th>Crops</th>
<th>% root infectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jowar</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>Bajara</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>Wheat</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>Maize</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>Cotton</td>
<td>20</td>
</tr>
</tbody>
</table>

Table showing the percentage of root infectivity of mycorrhiza in five different crops with respect to the village- Bodakhe, from Shevgaon taluka. The range of root infectivity found, 20-40 % only.
Graph No. 4.18
Percentage root infectivity with respect to crops (Bodakhe)

X axis – crops
Y axis - % root infectivity

Graph showing the root infectivity percentage of mycorrhizal fungi with respect to the root sample collected from the selected crops from the village- Bodakhe, from Shevgaon taluka.
### Table No. 4.17

Percentile root infectivity - Salwadgaon.

<table>
<thead>
<tr>
<th>Sr. Number</th>
<th>Crops</th>
<th>% root infectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jowar</td>
<td>90</td>
</tr>
<tr>
<td>2</td>
<td>Bajara</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>Wheat</td>
<td>70</td>
</tr>
<tr>
<td>4</td>
<td>Maize</td>
<td>70</td>
</tr>
<tr>
<td>5</td>
<td>Cotton</td>
<td>80</td>
</tr>
</tbody>
</table>

Table showing the percentage of root infectivity of mycorrhiza in five different crops with respect to the village - Salwadgaon, from Shevgaon taluka. The range of root infectivity found, 70-90 %. 
Graph No. 4.19
Percentage root infectivity with respect to crops (Salwadgaon)

X axis – crops

Y axis- % root infectivity

Graph showing the percentage of root infectivity of mycorrhizal fungi with respect to the roots collected from the different crops from village-Salwadgaon, from Shevgaon taluka.
Table No. 4.18

Percentile root infectivity- Malegaon.

<table>
<thead>
<tr>
<th>Sr. Number</th>
<th>Crops</th>
<th>% root infectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jowar</td>
<td>70</td>
</tr>
<tr>
<td>2</td>
<td>Bajara</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>Wheat</td>
<td>70</td>
</tr>
<tr>
<td>4</td>
<td>Maize</td>
<td>60</td>
</tr>
<tr>
<td>5</td>
<td>Cotton</td>
<td>80</td>
</tr>
</tbody>
</table>

Table showing the percentage of root infectivity of mycorrhiza in five different crops with respect to the village- Malegaon, from Shevgaon taluka. The range of root infectivity found, 60-80 %. 
Graph No. 4.20
Percentage of root infectivity with respect to the crops (Malegaon)

X-axis- Crops.
Y-axis – percentage root infectivity.

Graph Showing the root infectivity percentage of the mycorrhizal fungi with respect to the root samples collected from the village- Malegaon, from Shevgaon taluka.
Graph No. 4.21
Comparative data of percentage root infectivity with respect to crops.

X-axis: Different localities.
Y-axis: % root infectivity.

Line graph showing the values of the comparative data of the percentage root infectivity of mycorrhizal fungi with respect to crops and villages selected for research study.
Graph No. 4.22

VAM spores in rhizospheric and non-rhizospheric soil of Cotton

X axis – name of the villages
(Blue-rhizospheric soil; Red- non-rhizospheric Soil)
Y axis – number of spores

Graph Showing the number of mycorrhizal spores with respect to the villages selected for research study related to the rhizospheric and non-rhizospheric soil samples from each village in the Cotton crop season, in the month end of November.
Graph No. 4.23
Mycorrhizal spore count in rhizospheric and non-rhizospheric soil - Crop (Cotton)

X-axis-Name of locality
Y-axis-Number of spores

Graph showing the number of spores found in rhizospheric and non-rhizospheric region from the different villages selected for research study in cotton cropseason from the Shevgaon taluka.
Graph No. 4.24

VAM spores in rhizospheric and non-rhizospheric soil of Jowar

X axis – name of the villages
(Blue-rhizospheric soil; Red- non-rhizospheric Soil)
Y axis – number of spores

Column graph showing the number of mycorrhizal spores with respect to the villages selected for research study related to the rhizospheric and non-rhizospheric soil samples from each village in the jowar crop season, in the month of January.
Graph No. 4.25

Mycorrhiza spore count in rhizospheric and non-rhizospheric soil of crop (Jowar)

X-axis-Name of locality
Y-axis-Number of spores
(Blue-Rhizospheric soil; Red-Non-Rhizospheric soil)

Line graph showing the spore number from the rhizospheric and non-rhizospheric region from the soil samples collected from ten different villages which were selected for research study, in the jowar crop season from the Shevgaon taluka.
Graph No. 4.26
VAM spores in rhizospheric and non-rhizospheric soil of Bajara

X axis – name of the villages
(Blue-rhizospheric soil; Red-non-rhizo Soil)
Y axis – number of spores

Column graph showing the number of mycorrhizal spores with respect to the villages selected for research study related to the rhizospheric and non-rhizospheric soil samples from each village in the Bajara crop season, in the month of August.
Graph No. 4.27
Mycorrhiza spore count in rhizospheric and non-rhizospheric soil of crop (Bajara)

X-axis - Name of locality
Y-axis - Number of spores

Line graph showing the number of spores from rhizospheric and non-rhizospheric soil samples which were collected from ten different villages which were selected for the research study in the Bajara crop season from Shevgaon taluka.
Graph No. 4.28
VAM spores in rhizospheric and non-rhizospheric soil of Wheat

X axis – name of the villages
(Blue-rhizospheric soil; Red- non-rhizospheric Soil)
Y axis – number of spores

Column graph showing the number of mycorrhizal spores with respect to the villages selected for research study related to the rhizospheric and non-rhizospheric soil samples from each village in the Wheat crop season, in the month end of January.
Graph No. 4.29
Mycorrhiza spore count in rhizospheric and non-rhizospheric soil of Wheat crop

X-axis-Name of locality
Y-axis-Number of spores

Line graph showing the number of spores from rhizospheric and non-rhizospheric soil samples which were collected from ten different villages which were selected for the research study in the wheat crop season from Shevgaon taluka.
Graph No. 4.30
VAM spores in rhizospheric and non-rhizospheric soil of Maize

X axis – name of the villages
(Blue-rhizospheric soil; Red- non-rhizospheric Soil)
Y axis – number of spores

Column graph showing the number of mycorrhizal spores with respect to the villages selected for research study related to the rhizospheric and non-rhizospheric soil samples from each village in the maize crop season, in the month end of May.
Graph No. 4.31
Mycorrhiza spore count in rhizospheric and non-rhizospheric soil of Maize crop

X-axis-Name of locality
Y-axis-Number of spore

Line graph showing the number of spores from rhizospheric and non-rhizospheric soil samples which were collected from ten different villages which were selected for the research study in the Maize crop season from Shevgaon taluka.