Fig. 1. Showing intercellular migration and point of entry of the nematode (N). A = Compressed cells along the body length (Longitudinal Section, 24 h after inoculation).

Fig. 2. Showing migration of the nematode (N) towards the root tip. (L.S., 24 hai).

Fig. 3. Showing damaged cells (B). (L.S., 24 hai).

Fig. 4. Showing passage (P) made by the juvenile. (L.S. 24 hai).

Fig. 5. Showing hypertrophied and binucleate cells (C) along the nematode body (N). (L.S., 24 hai).

Fig. 6. Showing hypertrophied cells with dividing nuclei (E), and wall separation (F) in front of the nematode head. (L.S., 24 hai).

Fig. 7. Showing 4-nucleate hypertrophied cell (D) near the nematode body (N). (L.S., 24 hai).

Fig. 8. Showing hypertrophied nucleus with two hypertrophied nucleoli (G), and a differentiating vessel element. (L.S., 24 hai).
Fig. 9. Showing nematodes (N) in protophloem region.
(Transverse Section, 24 hai).

Fig. 10. Showing nematode head in protophloem region,
S = sieve tube elements. (L.S., 24 hai).

Fig. 11. Showing hypertrophied metaxylem vessel element (V)
near the giant cell (gc). (L.S., 48 hai).

Fig. 12. Showing giant cells (gc) with a large central vacuole
and parietally distributed cytoplasm. A = small
parenchyma cells, B = cells between the giant cells
and the protophloem. (L.S. 48 hai).

Fig. 13. Showing nematode head (N) in a giant cell having
hypertrophied nuclei (n). (L.S., 72 hai).

Fig. 14. Showing abnormal vessel elements (AV) enclosing
nuclei. (L.S., 72 hai).

Fig. 15. Showing endodermis (e) and multilayered pericycle (p)
(L.S., 72 hai).

Fig. 16. Showing giant cells (gc) connected with phloem.
S = sieve tube elements. (L.S., 72 hai).
Fig. 17. Showing abnormal vessel elements (AV); nematode (N); and patches of vascular strands. (L.S., 6 day after inoculation).

Figs. 18, 19 and 20. Showing disorientation of xylem strand in a 6 day old gall. (L.S.).

Fig. 21. Showing a single large nucleolus or many small nucleoli in the nuclei (n). Sieve tube element ending near the giant cells. (L.S., 6 dai).

Fig. 22. Showing an abnormal vessel element and gradually increasing width of normal vessels. (L.S., 6 dai).
Fig. 23. Showing a giant cell cluster. (L.S., 6 dai).

Fig. 24. Showing sieve tube elements (S) adjacent to the giant cells. (L.S., 6 dai).

Fig. 25. Showing sieve tube elements (S) and abnormal vessel elements near the giant cell. (L.S., 6 dai).

Fig. 26. Showing 9 day old gall in L.S.

Fig. 27. Showing formation of reticulate (A), scalariform (B) and spiral (C) vessel elements. (L.S., 9 dai).

Fig. 28. Showing a giant cell with extremely dense cytoplasm. (L.S., 9 dai).

Fig. 29. Showing abnormal vessel elements (AV) arising from hypertrophied parenchyma cell near the giant cell. (L.S., 9 dai).
Fig. 30. Showing sieve tube elements (P) of irregular shape and size, near the giant cells. (L.S. 9 dai).

Fig. 31. Showing transformation of abnormal vessel elements (AV) from parenchyma cells near to and away from the giant cell. (L.S. 9 dai).

Fig. 32. Showing a nematode (N) with its tail outside the plant and inducing giant cell. (L.S., 12 dai).

Fig. 33. Showing transformation of parenchyma cells into abnormal vessel elements in between the giant cell and the xylem strand. (L.S., 12 dai).

Fig. 34. Showing sieve tube elements near the giant cells (L.S., 12 dai).
Fig. 35. Showing abnormal vessel elements around the giant cell cluster (L.S., 12 dai).

Fig. 36. Showing sieve tube elements (?; passing around the giant cell cluster. (L.S., 15 dai).

Fig. 37 and 40. Showing giant cells and nematode (L.S., 18 dai).

Fig. 38. Showing abnormal vessel element (A) originating from empty giant cell (L.S., 15 dai).

Fig. 39. Showing giant cell formation in the cortical region near the root-let. (L.S., 18 dai).
Figs. 41 and 42. Showing nematode and giant cell cluster. (L.S. 24 dai).

Fig. 43. Showing abnormal phloem (P) near the giant cells and the nematode head (L.S., 24 dai).

Fig. 44. Showing sieve tube elements (P) pushed outward due nematode development (L.S., 27 dai).

Fig. 45. Showing an empty giant cell transforming into abnormal vessel element (AV). (L.S., 30 dai).

Fig. 46. Showing secondary infection; freshly hatched juveniles (J) feeding on old giant cells. (L.S., 30 dai).
Fig. 47. Showing giant cells of different shapes and sizes. (L.S.).

Fig. 48. Showing giant cell cluster in one parenchyma ray at low inoculum level (T.S.).

Fig. 49. Showing giant cells and mature females in all the parenchyma rays at high inoculum level. (L.S.).

Fig. 50. Showing large sized giant cells with dense cytoplasm at lower inoculum level. (L.S.).

Fig. 51. Showing small sized, almost empty giant cells at higher inoculum level. (L.S.).

Fig. 52. Showing abnormal vessel elements around the giant cells at high inoculum level. (L.S.).
Fig. 53. Showing abnormal phloem (P) near the giant cells at high inoculum level (L.S.).

Fig. 54. Showing dead nematode and necrotic area (A) in a young root of variety Faizabadi (L.S., 12 dai).

Fig. 55. Showing dead mature female near the giant cells in variety Faizabadi (L.S., 30 dai).

Fig. 56. Showing a mature female with empty egg sac in Faizabadi root (L.S., 40 dai).

Fig. 57. Showing a transverse section Faizabadi root.

Fig. 58. Showing a transverse section of Ghiya root.
Fig. 59. Showing a transverse section of Chikni root.

Fig. 60. Showing a transverse section of Aligarh local root.

Fig. 61. Showing enormous amount of xylem near giant cells in Aligarh local root (L.S.).

Fig. 62. Showing wider sieve tube elements near the giant cells in Faizabadi roots (L.S.).

Fig. 63. Showing dense giant cell cytoplasm with large nuclei in roots at 1N 1P 1K.
Fig. 64. Showing developing nematode at $-N$ level (L.S.).

Fig. 65. Showing mature female without egg mass, and large sieve tube elements (L.S.).

Fig. 66. Showing hypertrophied nuclei (n) and fragmenting nucleoli (nu) at 2N level (L.S.).

Fig. 67. Showing large giant cells with dense cytoplasm at 2N level. (L.S.).

Fig. 68. Showing mature female with egg mass (em) at 2N level (L.S.).
Fig. 69. Showing mature females with empty egg sacs at -K Level. (L.S.).

Fig. 70. Showing mature females with egg masses or with empty egg sacs at 1/2K level. (L.S.).

Fig. 71. Showing abnormal sieve tube elements and parenchyma cells near the giant cells at -K level. (L.S.).

Fig. 72. Showing dense giant cell cytoplasm and abnormal xylem near the giant cells at 2K level. (L.S.).

Fig. 73. Showing abundant parenchyma with large intercellular spaces near the giant cells at -P level. (L.S.).

Fig. 74. Showing small sized parenchyma cells and sieve tube elements at -P level. (L.S.).