1. To investigate various morphological parameters of treated plants such as the total height of the plant, total number of leaves per plant, leaf area, total number of branches per plant, number of capitula, dates of flowering and fruit formation in comparison to the control plants.

2. To evaluate the effect of growth regulators on various biochemical and physiological parameters such as the oil content of seeds, moisture content, refractive index, colour, iodine value, saponification value, unsaponifiable matter, free fatty acid (FFA), fatty acid profile of the niger seed oil and chlorophyll content (a, b and total) of the leaves.

3. To study the effect of colchicine growth inhibitor on the formation of stomata in the cotyledonary leaves.

4. To investigate the effect of sowing season on the growth and development of niger seed plants treated with various growth regulators.

5. To study the variations in the oil content, the moisture content, the iodine value, saponification value, unsaponifiable matter, refractive index, colour and protein content of niger seeds grown in different seasons.
6. To compare the response of two different varieties of niger seeds to growth regulators and sowing seasons.

7. To evaluate the quality of niger cake protein by determining the serum protein content, the apparent biological value (BV) and protein efficiency ratio (PER) by feeding the standard synthetic diet to the albino rats in which niger cake was incorporated in place of casein protein.

8. To study the effect of niger oil on the protein content and cholesterol in the serum by feeding the niger oil to the albino rats in the synthetic diet as compared to control (groundnut oil).

9. To study the effect of niger cake and niger oil on the functioning of liver by studying the activity of enzymes like SGOT (Serum Glutamate Oxalate Transaminase) and SGPT (Serum Glutamate Pyruvate Transaminase) and acid and alkaline phosphatase in the liver and serum of the treated albino rats as compared to the control.