

Departmental R&D Facility Mapping and Resource Sharing Report

Janta College, Bakewar-Etawah

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Submitted to the Institution Innovation Council (IIC) and the IQAC*

1. Background

Under the IIC action plan, the Department of Extension was asked to prepare a document mapping the R&D facilities available in different departments and to suggest how they could be shared. To do this, we collected information from twelve departments on their laboratories, equipment, working condition, technical staff, areas of expertise, and their views on sharing. The department-wise data is given in the table at the end of this report (Annexure). What follows is a plain reading of that data and a few suggestions based on it.

2. What the data shows

Condition of equipment. Four departments, namely Horticulture, Physics, Plant Pathology and Entomology, report that their equipment is fully functional. Physics has a research spectrometer and a telescope, Plant Pathology has an autoclave, laminar air flow and BOD incubator, and Entomology has microscopes and insect cages. Horticulture's laboratory is still under construction, but the mixer, grinder and refractometer it already has are working.

The picture is weaker elsewhere. Zoology, Biotechnology and Microbiology, Soil Conservation and Chemistry have equipment that is only partly working or needs repair. This includes some of the college's more valuable instruments, such as the PCR machine, centrifuges, spectrophotometers and the polarimeter. Genetics and Plant Breeding lists a spectrometer and a plant breeder kit, but reports them as non-functional, and Mathematics also reports non-functional status. Botany and Commerce have no laboratory equipment at present.

Technical staff. Only three departments, Physics, Plant Pathology and Entomology, have technical staff. The other nine have none. It is hard to miss that the departments with sensitive instruments and no technician, such as Zoology, Biotechnology and Chemistry, are mostly the ones whose equipment needs repair. The data cannot prove that one causes the other, but the link seems likely, and it points to where support is most needed.

Expertise. Several departments have knowledge that can be put to use even where equipment is limited: post-harvest management in Horticulture, mushroom research in Plant Pathology, and integrated pest management in Entomology. The Faculty of Commerce lists digital payments and UPI, financial literacy, banking, business studies and research methodology. This is useful for extension and socio-economic studies, where agricultural projects often need a financial or survey component.

Willingness to share. Nine departments are ready to share resources under institutional terms. Chemistry and Entomology are open to it on conditions, and Botany has nothing to share at present. The conditions people have attached are reasonable. Horticulture wants sharing to benefit both sides, and Genetics notes that the equipment is needed for both practicals and research. Commerce asks for prior approval and availability of resources. Plant Pathology and Soil Conservation would like a formal MOU, and Chemistry feels the policy should be set by the college management.

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3. Suggested basis for a sharing policy

Since the departments have asked for clear terms rather than informal arrangements, the policy can be kept simple. We suggest the following points as a starting draft for discussion:

- Any request to use another department's facility goes in writing to the head of that department, with prior approval.
- The host department's own teaching practicals and research always get first priority.
- Sensitive instruments are run by the host department's technician or a trained person, not by the visiting user alone.
- A common MOU format is used for all departments, covering the purpose, duration, and who is responsible for breakage.
- Consumables and a fair share of wear and tear are borne by the user.
- Every use is entered in a register or booking log, and the IIC reviews the arrangement once a year.

4. Recommendations

- **Repair drive.** Release a targeted fund to repair the equipment in Zoology, Biotechnology and Microbiology, Chemistry, Soil Conservation and Genetics, starting with the instruments that many departments would use.
- **Shared technician pool.** Appoint or designate a small group of laboratory technicians who can service several departments, rather than leaving most laboratories without any support.
- **Standard MOU.** Prepare one institution-wide MOU template for inter-departmental sharing, as requested by Plant Pathology and Soil Conservation, and have the management approve it.
- **Online equipment portal.** Develop a simple portal (Sub Theme 16) that lists instruments, their present condition, and how to book them. This will make existing resources visible to everyone.
- **Keep the data current.** Update the mapping table at the start of every semester so that repairs and new purchases are reflected.

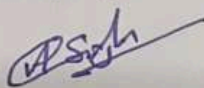
5. Related IIC activities

Alongside this mapping, other departments have been given tasks under the same plan: Soil Conservation will host Industry R&D Roundtables, Agricultural Dairy will run the Prototype Development Clinic, Agricultural Chemistry will conduct Research Paper Writing Support Workshops, Horticulture will bring out the Annual R&D Newsletter, Pathology will hold regular R&D review meetings, and Mathematics will organise the Annual Research Awards. Together, these can build a research culture that makes better use of the facilities described above.

6. A note on the data

The information in this report is as reported by the departments. It has not been checked through a physical inspection, and some entries, such as a few expertise and suggestion fields, were left blank. A short verification visit before the policy is finalised would be worthwhile.

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Annexure: R&D Facility Mapping Data Table
Janta College, Bakewar-Etawah | Data supplied by the respective departments

S.No.	Department	Name and Designation	R&D Lab	Equipment	Equipment Details	Status	Tech Staff?	Expertise	Resource Sharing?	Suggestions / Terms
1	Horticulture	Prof. Ashok Kumar Pandey	Under construction	Yes	Mixer, Grinder (Sujata), Refractometer	Fully functional	No	Post-harvest management	Yes, under institutional terms	Must be beneficial for both
2	Genetics and Plant Breeding	Dr. Dharmendra Kumar, Professor	-	Yes	Microscope, Plasmimeter, Spectrometer, Emasculation tool / Plant breeder kit	Non-functional	No	None	Yes, under institutional terms	Required for both practical and research
3	Zoology	Dr. Lalit Gupta, Professor	Research lab	Yes	Hot air oven, Incubator, Hot plate, Centrifuge, BOD, Compound and Binocular microscopes, Tissue processor, Spectrophotometer, pH meter, Field camera, Double distillation unit	Partially functional / Needs repair	No	-	Yes, under institutional terms	None
4	Botany	Dr. Lalit Gupta, Head	UG lab	No	Nil	-	No	-	No	-
5	Biotechnology and Microbiology	Dr. Lalit Gupta, Coordinator	UG and PG lab	Yes	Autoclave, Oven, Incubator, pH meter, Centrifuge, PCR, Spectrophotometer, Micropipette, Shaker	Partially functional / Needs repair	No	-	Yes, under institutional terms	-
6	Physics	Dr. Prakash Dubey, Head	Physics Department dark room	Yes	Research spectrometer, Telescope	Fully functional	Yes	-	Yes, under institutional terms	-
7	Plant Pathology	Dr. Manoj Kumar Yadav, Head and Assistant Professor	UG lab	Yes	Autoclave, Laminar air flow, Hot air oven, BOD incubator	Fully functional	Yes	Mushroom research	Yes, under institutional terms	MOU
8	Soil Conservation	Dr. P.K. Rajput, Professor	Yes	Yes	Meteorological equipment, Surveying and levelling equipment	Partially functional / Needs repair	No	Yes	Yes, under institutional terms	MOU
9	Faculty of Commerce	Dr. Yogesh Shukla, Dean	Nil	No	-	-	No	Commerce, Digital payments / UPI, Financial literacy, Banking and financial services, Business and management studies, Research methodology, Academic research project work	Yes, under institutional terms	Sharing may be facilitated under institutional rules, prior approval and availability of resources
10	Mathematics	Dr. Indu Bala Mishra, Assistant Professor	Nil	No	Nil	Non-functional	No	-	Yes, under institutional terms	-
11	Chemistry	Dr. Jyoti Bhadauria	2	Yes	Spectrophotometer, Conductivity meter, pH meter, Polarimeter, Polarography	Partially functional / Needs repair	No	No	Conditional	Resource sharing policy to be decided by college management
12	Entomology	Dr. Devendra Kumar Yadav	UG laboratory	Yes	Microscope, Insect cage, Foot sprayer	Fully functional	Yes	Integrated pest management	Conditional	None

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