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Kolkata, Aug 11 : Aimed at easing access to silk-related web resources, a portal on sericulture designed by Indian researchers comes with a built-in search engine to enable quick and accurate data mining and also seeks to protect indigenous knowledge on the subject.

Developed by researchers at Bioengineering Research Laboratory, Indian Institute of Technology-Guwahati, the portal is called 'SeriPort'. It is projected as a "database of databases" that pools in information from databases related to seriodiversity such as those on silkworms, host plants, pests, pathogens and the like.

Launched in May, it germinated from a systematic review of the existing databases on sericulture.

"Currently, about 70 databases have been appended to the portal," says Utpal Bora, the corresponding author of the review published recently in 'Database: The Journal of Biological Databases and Curation'.

It has 22 silkworm databases, 23 host plant databases, one pest and pathogen database and 24 combined databases.

"It would be strengthened to serve as a data aggregation platform for analytics and decision-making in future," Bora, who leads the Unit of Excellence for Seribiosciences (a project funded by India's Department of Biotechnology), told IANS.

The database has recorded over 3,800 hits so far and culls information from countries across the globe including top silk-producer China and leader in sericulture research, Japan.

But what triggered the effort to create a platform on sericulture?

"The need for the comprehensive database arose during our research on silk when we discovered it was difficult to find out what work had already been done," Deepika Singh, review co-author and a research scholar at the laboratory, told IANS.

Dynamism is achieved by adding emerging data sets continuously to the existing ones. Enthusiasts can also share their own databases.

Most importantly, it addresses the issue of "search engine invisibility" of several important seri-related databases, as in a website not showing up prominently on search engines.

"It does this by bringing all these databases on a common platform, surpassing the need for these databases' websites to perform search engine optimisation (SEO). This enhances accessibility for users including those employed in sericulture," said research scholar and co-author Hasnahana Chetia.

SEO is the process of improving the visibility of a website on search engine result pages.

The team is particularly optimistic with the portal's utility as a data science tool (to unlock the value of data) which is a "hot trend" among biologists.

The researchers also point out northeast India's special links with silk farming and the significance of the effort with regard to the region.

India is the second-largest producer of raw silk after China and the biggest consumer of raw silk and silk fabrics. Northeast India is particularly rich in these bioresources and holds a unique place in the world as it produces all the commercially exploited mulberry and non-mulberry silk varieties, the researchers said.

"Therefore, sericulture practices like silkworm rearing, silk weaving, etc., have become essential among the common traditional crafts of northeast India. We will also add data on patents generated on the subject as well as on indigenous sericulture practices. It would help protect traditional knowledge," added Chetia.

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