

Growth and development of agricultural universities education, research and libraries in Karnataka: a case study

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Abstract

The first agricultural university in Karnataka was started in UAS(B)-1964, UAS(D)-1986, KVAFSU(B)-2004, UHS(B)-2008, UAS(R)-2009 and UAHS(S)-2012 total 6 universities in field of agriculture, forestry, sericulture, horticulture, veterinary, dairy and fisheries colleges are working all over Karnataka.

Keyword: UASB, UASD, UASR, KVAFSU, UHS, UAHS, CeRA, Krishi Kosh and Krishi Prabha

Introduction

The rulers of Mysore Kingdom (Wodeyars) need to establish research units in the field of agriculture and donated about 30 acres of land 1899 to set up an experimental agricultural station at Hebbal and extended to about 1300 acres. This experimental station as a training centre led to the foundation of the Mysore Agricultural College was started at Hebbal in 1946 affiliated to Mysore University. Then Agricultural College at Dharwad in 1947 affiliated to Karnataka University and Veterinary College was started at Hebbal in 1958 affiliated to Mysore University. With contribution given by the Indian Government for the agricultural sector. The Mysore State Government through its Act No. 22 passed in 1963 provided for the creation of the University of Agricultural Sciences – Bangalore on August 21, 1964 with operational jurisdiction over the entire state of Karnataka.

The Prime Minister Indira Gandhi inaugurated GKVK campus. The university included the Agricultural College in Hebbal and Dharwad, Veterinary College in Hebbal and 35 research stations located in different parts of the state along with 45 ICAR projects which were with the state department of Agriculture, Horticulture, Animal Husbandry and Fisheries. K.C. Naik was the first Vice Chancellor of this new university. Later on the Marine Product Processing Training Centre (MPPTC) at Mangalore and Krishi Vigyan Kendra, Hanumanamatti, Dharwad district were also transferred this university.

The university established the Fisheries College at Mangalore in 1969 to provide degree level training and the Agricultural Engineering Institute at Raichur in the same year to offer a 3 years diploma course in Agricultural Engineering. The Home Science College was started to impart education on rural based home science at Dharwad campus in 1974.

Table 1: World Ranking Agricultural Universities in Karnataka 2017

Sl. No.	Universities	Year of Started	Indian Rank	World Rank
1	University of Agricultural Sciences - Bangalore	1964	153	3752
2	University of Agricultural Sciences - Dharwad	1986	307	6561
3	Karnataka Veterinary, Animal and Fisheries Sciences University - Bidar	2004	472	9743
4	University of Horticultural Sciences - Bagalkote	2008	809	13523
5	University of Agricultural Sciences - Raichur	2009	1659	18918
6	University of Agricultural and Horticultural Sciences - Shivamogga	2012	2308	21760

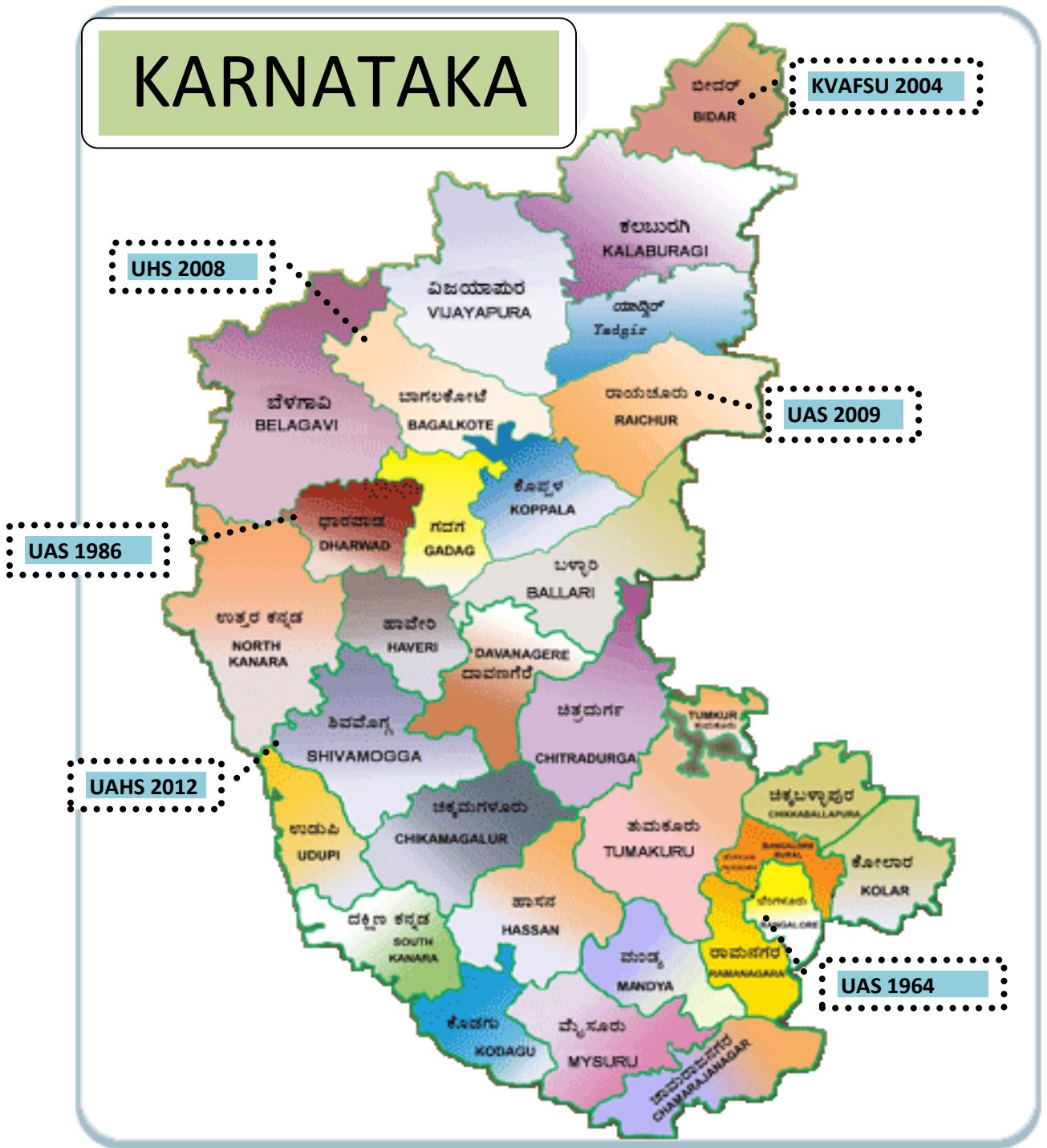


Fig. 1: University of Agricultural Sciences - Bengaluru

UAS – Bengaluru was established in 1964. It is one of the earliest Agricultural University in the country and celebrated Golden Jubilee during the year 2013-14. University is always performance in teaching, research and extension activities. The below mentioned colleges are working under this university.

Table 2: University of Agricultural Sciences –Bengaluru

Sl. No.	Colleges	Degree Offered	Year of Started	Departments
1	College of Agriculture - Bengaluru	B.Sc (Agri) B.Sc (Agri. MaCo) B.Tech (Agri. Eng.) M. Sc. – 23 Disciplines Ph. D. – 13 Disciplines	1965 1976 1996	1. Agronomy 2. Agricultural Economics 3. Entomology 4. Agricultural Engineering 5. Agricultural Extension 6. Agri. Marketing & Co-operation 7. Agricultural Microbiology 8. Agri. Statistics & Computer Science 9. Apiculture 10. Biotechnology 11. Crop physiology 12. Forestry & Environmental Science 13. Seed Science & Technology 14. Horticulture 15. Plant Pathology 16. Animal Science 17. Soil Science & Agri. Chemistry 18. Food Science and Nutrition 19. Sericulture 20. Genetics & Plant Breeding
2	College of Agriculture - Mandya	B. Sc. (Agri)	1999-2000	1. Crop Improvement 2. Crop Production 3. Crop Protection 4. Social Science
3	College of Agriculture - Hassan	B.Sc. (Agri). B.Sc. (Agri. Biotech.) B.Tech. (Food Science & Tech)	2006	1. Food Science and Technology 2. Agri. Biotechnology
4	College of Sericulture - Chintamani	B. Sc. (Agri)	2007	1. Agricultural Extension 2. Sericulture 3. Agronomy 4. Crop Physiology 5. Horticulture 6. Agri. Statistics & Computer Sciences 7. Plant Pathology 8. Entomology 9. Agricultural Engineering 10. Genetics & Plant Breeding 11. Agricultural Economics 12. Agri. Forestry & Environmental Sciences 13. Plant Biotechnology 14. Soil Sciences & Agri. Chemistry 15. Microbiology 16. Physical Education

The UAS - Dharwad was established on October 1, 1986. The university has 5 colleges, 30 research stations, 6 extension education units, 5 Krishi Vigyan Kendra and accredited by Indian Council for Agricultural Research with (A) Grade. The University covers jurisdiction area of 7 districts namely Bagalkote, Belagavi, Vijayapura, Dharwad, Gadag, Haveri, and Uttar Kannada in northern Karnataka. The jurisdiction includes dry-farming to heavy rainfall and irrigated area. Important crops of the region include sorghum, cotton, rice, pulses, chilli, sugarcane, groundnut,

sunflower, wheat, safflower and horticultural crops etc. The university is always in the field of education, research and extension activities. The below mentioned colleges are working under this university.

Table 3: University of Agricultural Sciences – Dharwad

Sl. No.	Colleges	Degree Offered	Year of Started	Departments
1	College of Agriculture - Dharwad	B.Sc. (Agriculture) B.Sc. (Agricultural Marketing and Co-operation) B.Tech. (Food Technology) M.Sc.(Agri) in 15 disciplines Ph.D. in 13 disciplines.	1947 1976	1. Agribusiness Management 2. Agricultural Economics 3. Agricultural Engineering 4. Agricultural Entomology 5. Agricultural Extension Education 6. Agricultural Microbiology 7. Agricultural Statistics 8. Agronomy 9. Animal Science 10. Biochemistry 11. Biotechnology 12. Crop Physiology 13. Environmental Science 14. Genetics & Plant Breeding 15. Horticulture 16. Physical Education 17. Plant Pathology 18. Seed Science & Technology 19. Soil Science 20. Veterinary Medicine 21. Agri. Meteorology
2	College of Agriculture - Vijayapura	B.Sc.(Agriculture)	1990	1. Agronomy 2. Agricultural Entomology 3. Plant Pathology 4. Genetics & Plant Breeding 5. Agricultural Economics
3	College of Rural Home Science - Dharwad	B.H. Sc	1974	1. Family Resource Management 2. Food Science & Nutrition 3. Extension & Communication Mgt. 4. Human Development & Family Studies 5. Textile & Apparel Designing
4	College of Agriculture - Hanumanmatti	B.Sc.(Agriculture)	2011	
5	College of Forestry - Sirsi	B.Sc.(Forestry)	1987	1. Forest Biology & Tree Improvement 2. Silviculture & Agro Forestry 3. Natural Resource Management 4. Forest Products & Utilization

UAS – Raichur was established on September 26, 2008. Demand for a Hyderabad-Karnataka (H-K) region. The jurisdiction area covers Bidar, Kalaburgi, Raichur, Bellary, Koppal and Yadgir districts. The university in a huge campus with enough space for agricultural experiments and research. The below mentioned colleges are working under this university.

Table 4: University of Agricultural Sciences – Raichur

Sl. No.	Colleges	Degree Offered	Year of Started	Departments
1	College of Agriculture - Raichur		1984	
2	College of Agriculture - Bheemarayanagudi		2001-2002	
3	College of Agriculture - Kalaburgi		2011	
4	College of Agricultural Engineering -	B-Tech (Ag.	1987	

	Raichur	Engg M. Tech (Ag. Engg)		
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The Governor of Karnataka has approved the establishment of UHS - Bagalkote on 2008. The choice of Bagalkote as the headquarters of the university is rightly justified because of two reasons namely, the rich horticultural production base of grapes, pomegranate, sapota, fig, lime, sweet lime, ber, varieties of vegetables, spices and medicinal plants: Besides, the bordering districts of Belagavi on West, Dharwad and Koppal on South, Vijayapura on North and Raichur on East because of the favourable climate for horticulture crops in this area. The below mentioned colleges are working under this university.

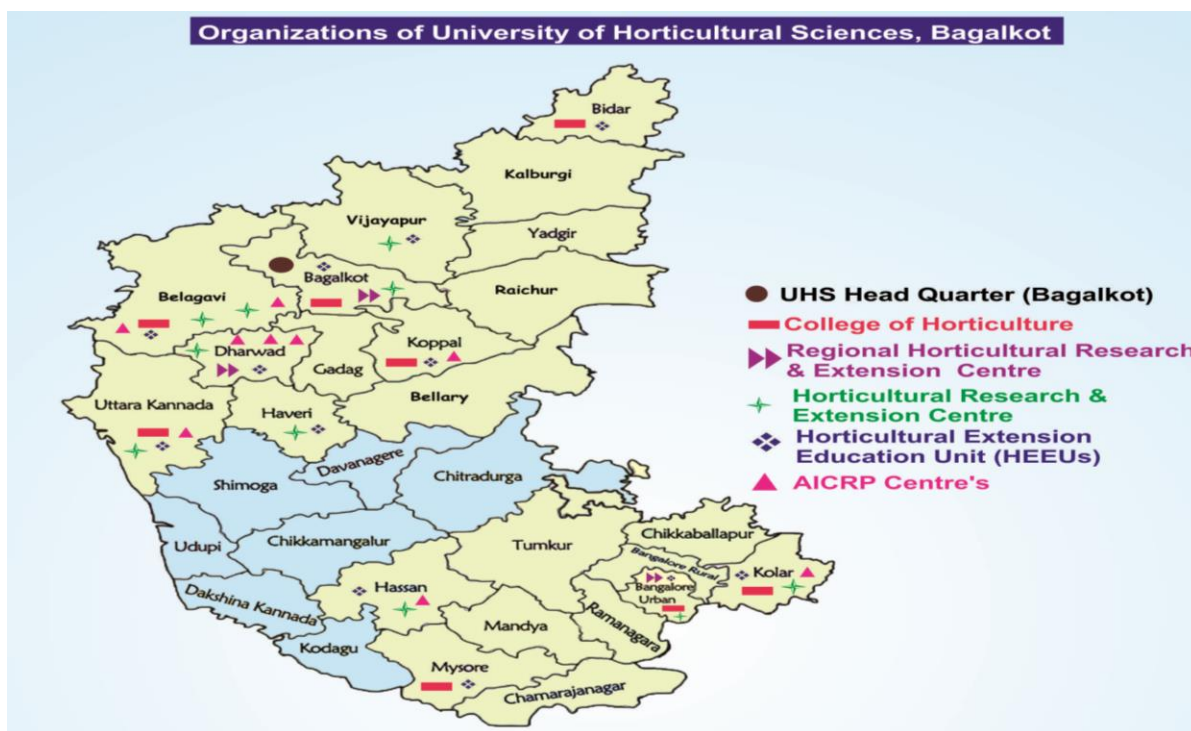


Fig. 2

Table 5: University of Horticultural Sciences - Bagalkot

Sl. No.	Colleges	Degree Offered	Year of Started	Departments
1	College of Horticulture - Arabhavi	B.Sc (Hort.)	1994-95	1. Vegetable Science 2. Fruit Sciences 3. Post-Harvest Technology 4. Floriculture & Landscape Architecture 5. Plantation, Spices, Medicinal & Aromatic Plants 6. Crop Improvement & Bio-Technology 7. Horticultural Entomology 8. Plant Pathology
2	College of Horticulture - Bagalkot	M.Sc (Hort.)	2008-09	
3	College of Horticulture - Bengaluru	Ph.D		
4	College of Horticulture - Bidar		2007-08	
5	College of Horticulture - Kolar	2009-10		
6	College of Horticulture - Koppal	2010-11		
7	College of Horticulture - Mysore	2010-11		
8	College of Horticulture - Sirsi	2010-11		
9	College of Horticulture Engineering and Food Technology - Devihosur			

The Government of Karnataka took bold steps in establishing the new university called KVAFSU on 2004 at Bidar. The university was established exclusively for the development of research, extension education and transfer the rural oriented technologies in the areas of veterinary, animal, dairy and fisheries sciences in Karnataka. The primary objective and mandate of the university is to uplift the rural livestock, poultry and fish farmers with a motto of 'Rural Oriented and Farmer Friendly' activities. The university has a territorial jurisdiction of entire State of Karnataka covering all 28 districts. The below mentioned colleges are working under this university.

Table 6: University of Agricultural and Horticultural Sciences - Shivamogga

Sl. No.	Colleges	Degree Offered	Year of Started	Departments
1	Veterinary College - Hebbal, Bengaluru	B.V.Sc (Vet.) M.V.Sc (Vet.) Ph.D.	1958	<ol style="list-style-type: none"> 1. Veterinary Medicine 2. Anatomy & Histology 3. Vet. & Animal Husbandry Extension 4. Veterinary Gynecology & Obstetrics 5. Livestock Products Technology 6. Veterinary Microbiology 7. Veterinary Pathology 8. Veterinary Physiology 9. Epidemiology & Preventive Med. 10. Veterinary Public Health 11. Animal Genetics & Breeding. 12. Animal Nutrition 13. Veterinary Biochemistry 14. Livestock Production & Management 15. Veterinary Parasitology 16. Vet. Pharmacology & Toxicology 17. Poultry Science 18. Surgery & Radiology 19. TVCC 20. ILFC
2	Veterinary College - Bidar	B.V.Sc (Vet.) M.V.Sc (Vet.) Ph.D.	1984	<ol style="list-style-type: none"> 1. Veterinary Anatomy & Histology 2. Vet. Physiology & Biochemistry 3. Pharmacology & Toxicology 4. Veterinary Microbiology 5. Veterinary Parasitology 6. Veterinary Public Health 7. Veterinary Pathology 8. Animal Nutrition 9. Animal Genetics & Breeding 10. LPM 11. LPT 12. Veterinary Gynecology & Obstetrics 13. Veterinary Surgery & Radiology 14. Veterinary Medicine 15. TVCC 16. Vet. & Animal Husbandry Extension 17. Avian Production & Management 18. ILFC

3	Veterinary College - Shivamogga	B.V.Sc (Vet.) M.V.Sc (Vet.)	2006-07	<ol style="list-style-type: none"> 1. Veterinary Anatomy 2. Vet. Physiology & Biochemistry 3. Vet. Pharmacology & Toxicology 4. Veterinary Parasitology 5. Veterinary Microbiology 6. Veterinary Pathology 7. Vet. Public Health & Epidemiology 8. Animal Nutrition 9. AGB 10. LPM 11. LPT 12. VGO 13. Veterinary Surgery & Radiology 14. Veterinary Medicine 15. Vet. & Animal Husbandry Extension 16. TVCC 17. ILFC 18. Physical Education
4	Fisheries College - Mangaluru	B.F. Sc. (Fishery) M. F. Sc. (Fishery) Ph. D	1969	<ol style="list-style-type: none"> 1. Aquaculture 2. Fishery Microbiology 3. Fisheries Economics 4. Aquatic Environment & Mgt. 5. Fish Processing Technology 6. Fisheries Resources & Management 7. Fishery Engineering 8. Basic Sciences 9. Fishery Biochemistry 10. Physical Education t 11. Fish. Statistics & Computer Science
5	Dairy Science College - Bengaluru	B.Tech. (Dairy) M. Tech. (Dairy) Ph.D.	1980	<ol style="list-style-type: none"> 1. Dairy Technology 2. Dairy Chemistry 3. Dairy Microbiology 4. Dairy Engineering 5. Dairy Economics & Business Mgt. 6. Dairy Extension Education 7. Statistics & Computer Science 8. Physical Education
6	Dairy Science College - Gulbarga	B.Tech. (Dairy)		

7	Veterinary College - Hassan	B.V.Sc. (Vet.)	2007-08	<ol style="list-style-type: none"> 1. Veterinary Anatomy 2. Vet. Physiology & Biochemistry 3. Animal Genetics & Breeding 4. Animal Nutrition 5. Livestock Production & Management 6. Livestock Products Technology 7. Vet. & Animal Husbandry Extension 8. Veterinary Microbiology 9. Veterinary Parasitology 10. Veterinary Pathology 11. Vet. Public Health & Epidemiology 12. Vet. Pharmacology & Toxicology 13. Veterinary Medicine 14. Veterinary Surgery & Radiology 15. Vet. Gynaecology & Obstetrics 16. TVCC 17. ILFC 18. Physical Education
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The UAHS - Shivamogga was established on 2012 is the first integrated university in the State of Karnataka, which has both agricultural and horticultural sciences under its purview. The jurisdictional area of covers the 7 districts namely Shivamogga, Chickamagaluru, Udupi, Dakshina Kannada, Kodagu, Davanagere and Chitradurga. The below mentioned colleges are working under this university.

Table 7: University of Agricultural & Horticultural Sciences - Shivamogga

Sl. No.	Colleges	Degree Offered	Year of Started	Departments
1	Agricultural College - Shivamogga	B.Sc. (Agri.) M.Sc. (Agri.) PhD	1990	<ol style="list-style-type: none"> 1. Agricultural Entomology 2. Soil Science & Agricultural 3. Chemistry 4. Genetics & Plant Breeding 5. Horticulture 6. Plant Pathology 7. Agricultural Extension 8. Agronomy
2	Horticultural College - Mudigere	B.Sc. (Hort.) M.Sc. (Hort.)	1991	<ol style="list-style-type: none"> 1. Fruit Science 2. Floriculture & Landscape Architecture 3. Plantation, Spices, Medicinal and Aromatic Crops 4. Horticultural Entomology 5. Vegetable Science 6. Crop Improvement & Biotechnology
3	Horticultural College - Hiriur	B.Sc. (Hort.)	2010	<ol style="list-style-type: none"> 1. Fruit crops 2. Vegetable Crops 3. Floriculture & Ornamental Crops 4. Post-Harvest Technology 5. Crop Improvement & Biotechnology 6. Plant protection 7. Natural Resource Management 8. Social Sciences
4	Forestry College - Ponnampet	B.Sc. (Forestry) M.Sc. (Forestry) in Plantation Technology	1995 2001	<ol style="list-style-type: none"> 1. Natural Resource Management 2. Forest Biology & Tree Improvement 3. Silviculture & Agro Forestry 4. Forest Products & Utilization

5	Agricultural Diploma Institute - Brahnavar	Diploma (Agri.)	2013	
6	Agricultural Diploma Institute - Kathalagere	Diploma (Agri.)	2011-12	

National Agricultural Research System to develop & strengthen projects like CeRA, Krishi Prabha & Krishi Kosh

CeRA is the project of e- Journals related to agricultural information. Consortium for e-Resources in Agriculture is a working under the Indian Council of Agricultural Research for National Agricultural Research System libraries. The NARS comprises Central / State Agricultural Universities under Ministry of Agriculture, Government of India. The main features and advantages of the CeRA provides access to articles from nearly 3500 journals in the broad spectrum of agricultural sciences, including 194 journals in the subjects of animal husbandry, livestock management, poultry sciences, animal nutrition, feed additives manufacture, dairy technology, fisheries, aquaculture and veterinary science.

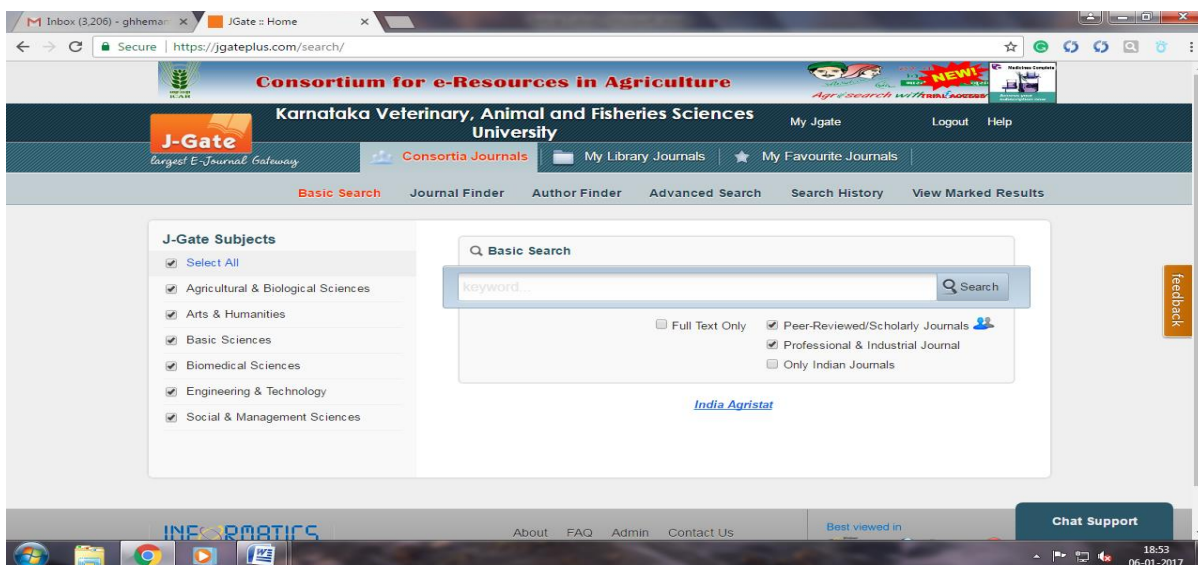


Fig. 3

Krishi Prabha is a full text database of Indian agricultural doctoral dissertations submitted by research scholars to the 45 State Agricultural Universities, Deemed Agricultural Universities and ICAR Institutes in India. A copy each of these dissertations is placed in the libraries of the respective Universities / Institutes. These sources of information can be utilized to its full potential.

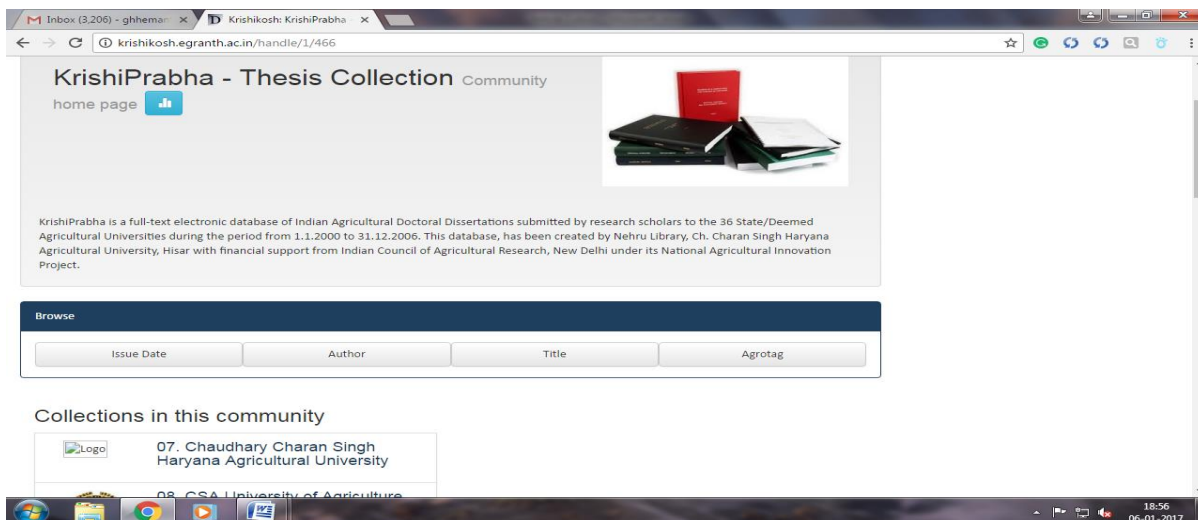


Fig. 4

Krishi Kosh is also has contributed to the project strengthening of digital library and information management under NARS (e-Granth) by setting up a work station for digitization of old resources prior to 1960, which is housed in the library building. Library also is in process of developing a video library which will enable access to all the videos related to agriculture, video lectures and related materials for the benefit of faculty, students and other individuals related to agriculture research and development. Thus the university library has implemented and will adopting new technologies to keep pace with the growing information needs of the community to provide better information services.



Fig. 5

Conclusion

The Indian Council of Agricultural Research (ICAR) is the apex body regulating agricultural research and education. It is an autonomous body working under the auspices of Department of Agricultural Research and Education. The Agricultural University libraries well resources available and well services provided to students, research scholars and staff on printed materials and non-printed materials like, Books, Journals, Back Volumes, Pamphlets, Thesis / Dissertation, Reports, Microfilms, Microfiche, Maps, CDRom / DVDs and e-Resources, e-Books, e-Journals etc.

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