

ESCOP - ECOP

Biotech Survey

University Challenges and Opportunities Related to
Biotechnology: 2002

Findings of an Internet Poll of
Land Grant University (LGU) Faculty

Topline Report



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METHODOLOGY

The findings of this research are based on an Internet survey of 1,342 faculty members in Land Grant Universities conducted in 2002.

ESCOP – ECOP BIOTECH SURVEY – Topline Results

SURVEY RESULTS

ROLE OF LAND GRANT UNIVERSITIES

Q1. Please rate each of the following biotechnology-related activities as to its importance for the Land Grant University system and how much each is needed. (1=Not important and not needed 5=Very important and needed right away)

	Btm	1	2	3	4	5	Top	NA
	2						2	
Provide research-based information to public policy makers	2	1	1	7	32	57	89	2
Conduct research to assess the environmental impacts of biotechnology	2	0	2	8	28	60	88	1
Conduct research to assess the food safety / health risks of biotechnology	3	1	3	10	25	61	86	1
Interpret research findings and assist in the identification of problems	3	1	2	15	40	39	80	2
Conduct basic research (as in the area of genomics)	8	2	5	15	31	44	76	1
Interpret trends and anticipate consequences of biotechnology	6	1	5	18	36	38	74	1
Conduct research to assess the social and economic impacts of biotechnology	8	2	7	20	29	41	70	1
Help farmers understand the application of biotechnology	8	2	6	21	35	35	70	1
Develop and deliver training for Extension agents	9	2	7	20	35	34	69	1
Conduct applied research (such as development of new crop varieties)	10	4	7	20	31	37	68	2
Provide information to the general public through the mass media	10	3	7	21	35	33	67	2
Develop Extension educational materials for consumers	10	2	8	21	36	31	67	2
Analyze and discuss the ethical implications of biotechnology	11	3	8	23	32	33	64	2
Develop and conduct training programs for government agency personnel	23	6	16	31	30	14	44	2

STRATEGIC ASSESSMENT

Q2. The Land Grant University system has certain strengths that could enable it to play an effective role in addressing the challenges and opportunities associated with biotechnology. Please rate each of the following strengths in terms of how well it describes the LGU system. (1=Does not describe the LGU system at all 5=Describes the LGU system very well)

	Btm	1	2	3	4	5	Top	NA
	2						2	
Scientific expertise and knowledge base	1	0	1	6	30	61	91	2
Links to farm and commodity groups	4	1	3	17	37	37	73	5
Credibility with the public	5	1	4	21	44	29	73	2
Direct contact with public through extension programs	8	1	7	20	35	35	70	2
Interdisciplinary orientation and multidisciplinary expertise	8	2	6	24	37	29	66	2
Third party position for interaction with public and private entities	11	2	9	26	39	22	61	2
Other important strengths (Please list):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Q3. The Land Grant University system has certain weaknesses that could prevent it from playing an effective role in addressing the challenges and opportunities associated with biotechnology. Please rate each of the following weaknesses in terms of how well it describes the LGU system. (1=Does not describe the LGU system at all 5=Describes the LGU system very well)

	Btm 2	1	2	3	4	5	Top 2	NA
Shrinking government funding	5	2	4	11	26	56	83	1
Lack of flexibility in deployment of resources	13	3	11	25	36	25	61	1
Slow to act and resistant to change	14	2	11	28	34	23	57	1
Not market driven in its programs	23	6	16	30	30	15	45	2
Lack of coordination and cooperation among Land Grant Universities	23	6	18	31	27	14	41	5
Limited attention to social and ethical issues	26	7	19	32	25	15	40	1
Limited ability to communicate with the lay public	44	14	30	27	22	7	28	1
Other important weaknesses (Please list):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Q4. The Land Grant University system faces certain opportunities associated with biotechnology. Please rate each of the following opportunities in terms of its importance. (1=Not important 5=Very important)

	Btm 2	1	2	3	4	5	Top 2	NA
Opportunities to apply multi-disciplinary expertise	4	1	3	13	40	42	82	2
Opportunity to remain relevant	5	2	3	14	37	42	78	3
Chance to provide relevant information and real service to farmers	7	2	5	18	36	38	74	2
Chance to access new sources of funding	7	3	4	20	40	32	71	2
Chance to increase capability for dealing with complex & controversial issues	6	1	5	22	36	34	70	2
Other important opportunities (Please list):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Q5. The Land Grant University system faces certain threats associated with biotechnology. Please rate each of the following threats in terms of its severity. (1=Not serious 5=Very serious)

	Btm 2	1	2	3	4	5	Top 2	NA
May not be perceived as neutral on the topic	12	4	8	18	33	35	68	2
May face competition from other groups to do the same work	20	6	14	24	30	24	54	2
Could cause negative reaction from traditional clientele	30	8	22	32	26	11	37	2
May cause declines in traditional funding sources	37	10	27	30	20	11	31	2
Other threats (Please list):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Q6. In the past few years, increasing attention has been focused on the links between research programs in land grant universities and industry. For each of the following statements, indicate your agreement. (1=Strongly disagree, 3=Neutral, 5=Strongly agree)

	Btm 2	1	2	3	4	5	Top 2	NA
Increased corporate sponsorship of land grant agricultural research is necessary because public research funds are no longer adequate	18	8	10	22	33	25	58	2
Increased linkages between public agricultural researchers and private firms will enable more rapid transfer of new technology to farmers	19	7	12	25	37	17	54	2
If linkages between public agricultural researchers and private industry continue to increase, public research will have become too oriented to the needs of industry	24	6	18	23	28	24	51	2
Increased university-industry linkages are essential in developing new technologies to meet foreign competition	24	9	15	26	31	18	49	2
Linkages between public agricultural research institutions and private companies should be strengthened	23	9	14	28	30	18	48	2
Linkages between public agricultural and private firms help make agricultural research institutions more relevant to the needs of farmers	24	9	16	26	35	12	47	2
Universities should avoid becoming too involved in biotechnology research with private companies	38	15	23	20	24	16	40	1
Private industry has too much influence on land-grant biotechnology research	34	11	23	27	21	17	38	2

IEWS ON THE IMPACTS OF BIOTECHNOLOGY

Q7. There are a number of possible uses of modern biotechnology with different potential impacts. Rank the following potential benefits in terms of importance to society. (1=Not important 5=Very important)

	Btm 2	1	2	3	4	5	Top 2	NA
Reduce the need for chemical pesticides or herbicides	5	2	3	9	31	52	84	2
Promote environmental protection or sustainability	7	3	4	11	32	48	80	2
Improve the safety of foods	9	4	5	15	34	40	74	2
Enhance nutritional content of foods	7	3	4	16	41	33	74	3
Produce higher quality food ingredients	9	4	5	19	46	24	70	3
Enhance nutritional quality of animal feed	9	4	5	23	46	19	65	2
Lower costs for farmers	13	6	7	21	35	28	63	2
Reduce the type or amount of fat in foods	19	8	11	28	36	15	51	2
Lower the cost of food for consumers	23	9	14	26	28	20	49	3
Lower the cost of ingredients for food processors	27	10	17	31	29	9	39	3
Improve the taste of food	31	11	20	33	26	8	34	2

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Q8. How much benefit do you think each of the following groups will receive from the use of biotechnology in agriculture and food production? (1=No benefit 5=Great benefit)

	Btm 2	1	2	3	4	5	Top 2	NA
Biotechnology companies	1	0	0	3	23	71	94	2
Food processors or manufacturers	6	1	6	24	45	22	68	2
Farmers in the US	17	5	12	19	37	25	61	2
Consumers in the US	17	6	10	30	32	18	51	2
Farmers in developing countries	29	10	19	22	24	23	47	2
Consumers in developing countries	30	13	18	21	23	24	46	2
Land Grant Universities	15	4	10	37	36	9	45	3

Q9. How important is each of the following concerns that have been raised about the use of biotechnology in agriculture and food production? (1=Not important 5=Very important)

	Btm 2	1	2	3	4	5	Top 2	NA
Increased corporate control over agriculture	17	5	11	17	26	38	64	2
Potential negative environmental or ecological impacts	22	6	16	20	25	31	56	2
Long term effects / impacts on future generations	24	9	15	19	25	30	55	3
Logistical and segregation problems in marketing	17	6	11	25	29	26	55	3
Lack of labeling for consumer choice	22	10	12	22	26	28	54	2
Potential food safety/health risks	31	9	21	18	24	25	49	3
Moral or ethical issues	31	13	18	26	21	20	41	2
Lack of benefits for consumers	30	13	17	26	21	19	41	3
Increased costs or prices of products developed through biotechnology	29	9	20	29	25	15	40	3

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Q10. For each of the following statements about the use of modern biotechnology in agriculture and food production, please indicate your agreement or disagreement. (1=Strongly disagree, 3=Neutral, 5=Strongly agree)

	Btm						Top	
	2	1	2	3	4	5	2	NA
Government should fund more biotechnology research because of the potential benefits to the public	9	3	6	18	37	34	71	2
Public concerns over the safety of agricultural biotechnologies are out of proportion with the actual risks	19	7	12	13	29	38	66	3
Biotechnology has already provided benefits to consumers	17	6	11	17	35	29	64	2
The benefits of using biotechnology to create food crops that do not require chemical pesticides are greater than the risks	18	8	9	21	30	29	59	2
The social and economic impacts of biotechnology have been given too little attention by most agricultural scientists	19	5	14	20	30	29	58	2
Large biotechnology corporations will gain too much control over farmers' inputs through patenting	18	4	13	22	29	29	58	3
Regulation of biotechnology should be based solely on the best available science rather than on consumer demands	26	9	17	16	28	29	57	2
If American companies are not allowed to develop biotechnologies other countries will do so and gain competitive advantage	19	5	14	23	34	22	56	3
Most consumers will buy foods produced with biotechnology if they are more nutritious	22	6	16	29	37	10	47	2
Patenting is essential if biotechnology companies are to bring new technologies to the American farmer	23	9	14	29	34	12	46	2
We have to accept some degree of risk from biotechnology if it enhances the economic competitiveness of our country	35	14	22	25	29	8	37	2
The best future for American agriculture lies in the rapid development of biotechnology	28	12	16	34	25	11	36	2
Current regulations are not sufficient to protect people from the risks linked to biotechnology	43	18	24	22	20	14	33	2
Until we know more, biotechnology should not be used because of unpredictable, potential risks	64	34	30	17	10	6	17	2
Current federal regulations on biotechnology are excessive and will stifle innovation	53	18	35	34	8	2	11	2
Advances in biotechnology will NOT be very important for the future of US agriculture	81	56	25	9	5	3	8	2

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COMMUNICATION

Q11. How important would it be for consumers to receive more information about each of the following topics? (1=Not important 5=Very important)

	Btm 2	1	2	3	4	5	Top 2	NA
The effects of biotechnology on food safety or nutrition	1	0	1	5	26	66	92	2
The effects of biotechnology on the environment	2	1	1	5	30	61	91	2
The effects of biotechnology on food quality (including taste)	6	1	4	13	36	43	79	2
The effects of biotechnology on food costs	9	3	7	19	35	34	69	2
Social and economic implications of biotechnology	11	2	9	23	35	30	65	2
The science behind biotechnology	12	3	9	23	31	32	63	2
Government policies and regulations regarding food biotechnology	9	2	8	27	37	24	61	2
Ethical and moral issues associated with biotechnology	16	5	11	24	28	29	57	3
Other (Please specify):	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Q12. How useful would each of the following be for providing consumers with additional information about agricultural biotechnology? (1=Not at all useful 5=Very useful)

	Btm 2	1	2	3	4	5	Top 2	NA
Television News broadcasts	12	5	8	12	34	40	73	3
News magazines (such as Time or Newsweek)	8	2	6	23	44	23	66	3
The Internet	9	2	7	22	39	27	66	3
Daily Newspapers	8	2	6	24	43	22	65	3
Conversations with other people (such as family or friends)	17	5	12	27	29	23	51	5
Fact sheets or newsletters	30	7	22	32	25	11	36	3
Meetings or conferences sponsored by the Extension Service	33	9	24	32	22	11	33	3
Other (Please specify)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Q13. How would you describe the overall tone of media reports about modern biotechnology in your state? (1=Very negative 5=Very positive)

	Btm 2	1	2	3	4	5	Top 2	NA
How would you describe the overall tone of media reports about modern biotechnology in your state?	28	4	24	45	22	3	25	2

Q14. Suppose you were asked to give a presentation about agricultural biotechnology. How comfortable would you be with the subject matter? (1=Not at all comfortable 5=Completely comfortable)

	Btm 2	1	2	3	4	5	Top 2	NA
Suppose you were asked to give a presentation about agricultural biotechnology. How comfortable would you be with the subject matter?	24	9	15	23	33	18	51	2

Q15. Overall, would you say you strongly support, support, oppose, or strongly oppose the use of biotechnology in agriculture and food production? (1=Strongly oppose 5=Strongly support)

	Btm 2	1	2	3	4	5	Top 2	NA
Overall, would you say you strongly support, support, oppose or strongly oppose the use of biotechnology in agriculture and food production?	9	3	6	18	33	38	71	2

Q16. Why do you (support / oppose) the use of biotechnology in agriculture and food production? UNAIDED RESPONSE

Why do you (support/oppose) the use of biotechnology in agriculture and food production?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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Q17. What do you feel are the most important unresolved issues about the use of modern biotechnology in agriculture and food production? UNAIDED RESPONSE

What do you feel are the most important unresolved issues about the use of modern biotechnology in agriculture and food production?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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ESCOB – ECOP BIOTECH SURVEY – Topline Results

TELL US ABOUT YOURSELF

Q18. Are you male or female?

DK/NA	Female	Male
2	18	79

Q19. Which best describes your role in the Land Grant University?

Administration (Dean, Department Head, etc.)	Professor	Managerial/ Academic Professional	Extension Personnel	Other
15	60	6	15	4

Q20. What discipline is your highest degree in?

AgBio Scientists	Social Scientists	No Response/Other
49	25	26

Q21. Which region do you live in?

Midwest	Northeast	South	West	No Response
31	15	32	17	6

MIDWEST	NORTHEAST	SOUTH	WEST
Ohio	Maine	Delaware	Montana
Indiana	New Hampshire	Maryland	Idaho
Illinois	Vermont	Dist. of Columbia	Wyoming
Michigan	Massachusetts	Virginia	Colorado
Wisconsin	Rhode Island	West Virginia	New Mexico
Minnesota	Connecticut	North Carolina	Arizona
Iowa	New York	South Carolina	Utah
Missouri	New Jersey	Georgia	Nevada
North Dakota	Pennsylvania	Florida	Washington
South Dakota		Kentucky	Oregon
Nebraska		Tennessee	California
Kansas		Alabama	Alaska
		Mississippi	Hawaii
		Arkansas	
		Louisiana	
		Oklahoma	
		Texas	