

Survey Software: Ask, Analyze, Improve

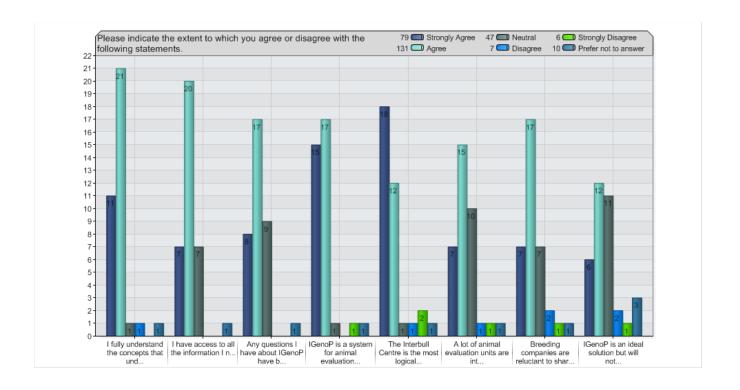
Survey Creation, Deployment, & Analysis Tools for Businesses

Survey: IGenoP

Report: Default Report

| Survey Status | | Respondent Statistics | | Points Summary |
|---------------|------------|-----------------------|----|--|
| Status: | Live | Total Responses: | 35 | No Points Questions used in this survey. |
| Deploy Date: | 02/10/2011 | Completes: | 34 | |
| Closed Date: | | Partials: | 1 | |
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|--|-------------------|------------|------------|-------------------|----------------------|----------------------|-------|
| | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Prefer not to answer | Total |
| I fully understand the concepts that underlay IGenoP: | 11(31.43%) | 21(60%) | 1(2.86%) | 1(2.86%) | 0(0%) | 1(2.86%) | 35 |
| have access to all the information I need about IGenoP: | 7(20%) | 20(57.14%) | 7(20%) | 0(0%) | 0(0%) | 1(2.86%) | 35 |
| Any questions I have about IGenoP have been well answered: | 8(22.86%) | 17(48.57%) | 9(25.71%) | 0(0%) | 0(0%) | 1(2.86%) | 35 |
| IGenoP is a system for animal evaluation units to share genotypes: | 15(42.86%) | 17(48.57%) | 1(2.86%) | 0(0%) | 1(2.86%) | 1(2.86%) | 35 |
| The Interbull Centre is the most logical place to host the IGenoP database: | 18(51.43%) | 12(34.29%) | 1(2.86%) | 1(2.86%) | 2(5.71%) | 1(2.86%) | 35 |
| A lot of animal evaluation units are interested in sharing genotypes: | 7(20%) | 15(42.86%) | 10(28.57%) | 1(2.86%) | 1(2.86%) | 1(2.86%) | 35 |
| Breeding companies are reluctant to share genotypes: | 7(20%) | 17(48.57%) | 7(20%) | 2(5.71%) | 1(2.86%) | 1(2.86%) | 35 |
| IGenoP is an ideal solution but will not be supported by the big countries: | 6(17.14%) | 12(34.29%) | 11(31.43%) | 2(5.71%) | 1(2.86%) | 3(8.57%) | 35 |
| | | | | Total Responded t | o this question: | 35 | 100% |
| | | | | Total who skippe | d this question: | 0 | 0% |
| | | | | | Total: | 35 | 100% |



| | Extremely Strong | Strong | Neutral | Weak | Very Weak | Prefer not to answer | Total |
|---|-------------------------------------|--------------------|-------------------|--------------------------------------|----------------------|-----------------------------------|------------|
| Larger training populations: | 19(54.29%) | 7(20%) | 3(8.57%) | 3(8.57%) | 1(2.86%) | 2(5.71%) | 35 |
| Removal of selection bias: | 5(14.29%) | 15(42.86%) | 8(22.86%) | 3(8.57%) | 1(2.86%) | 3(8.57%) | 35 |
| ore accurate genomic evaluations for imported selection candidates: | 12(34.29%) | 11(31.43%) | 6(17.14%) | 3(8.57%) | 0(0%) | 3(8.57%) | 35 |
| fore rapid delivery of genomic breeding values for potential imported selection candidates: | 6(17.14%) | 13(37.14%) | 7(20%) | 3(8.57%) | 3(8.57%) | 3(8.57%) | 35 |
| Saving of costs associated with esearching, creating, building and maintaining a database of genotypes: | 13(37.14%) | 8(22.86%) | 7(20%) | 4(11.43%) | 2(5.71%) | 1(2.86%) | 35 |
| mproved competitive position of local breeding organisations: | 4(11.43%) | 9(25.71%) | 12(34.29%) | 5(14.29%) | 2(5.71%) | 3(8.57%) | 35 |
| More profitable cattle farming: | 5(14.29%) | 13(37.14%) | 10(28.57%) | 1(2.86%) | 2(5.71%) | 4(11.43%) | 35 |
| | | | | Total Responded to Total who skipped | • | 35 0 | 100% 0% |
| | | | | | Total: | 35 | 100% |
| Please indicate IGenoP are for y 19 18 17 16 15 | how strong or weak your country. | you think the bene | efits claimed for | 64 Extremely Strong 76 Strong | 53 Neutral 22 Weak | 11 Dery Weak 19 Prefer not to ans | swer |
| 13 - 12 - 11 - 10 - 9 - 8 - 7 - 6 - | 8 | 12 | 13 | 13 | 9 | 13 | |

More accurate genomic evaluations for im... More rapid delivery of genomic breeding ...

Saving of costs associated with research... Improved competitive position of local b... More profitable cattle farming

Larger training populations

Removal of selection bias

| | er benefits are there for IGenoP? | | | | |
|-------------|---|---|--------------|--|--|
| | | Responses | Percent | | |
| | Responses: | 13 | 100% | | |
| | Total Responded to this question: | 13 | 37.14% | | |
| | Total who skipped this question: | 22 | 62.86% | | |
| | Total: | 35 | 100% | | |
| | Graph/Chart function not relevant for this question type. | | | | |
| 3. What oth | er benefits are there for IGenoP? | | | | |
| Response | Response Text | | | | |
| 1 | Opportunities to quickly establish most appropriate evaluation methodologies, based on having access to all available information | | | | |
| 2 | To diminish the price of genotyping if IGenoP searchs to negociate the prices of genotyping. | | | | |
| 3 | Create links between genomic evaluations and regular international / national evaluations | | | | |
| 4 | Making genomics available to smaller countries that may not have large training populations. | | | | |
| 5 | Sharing of research expertise and software, collaboration. | | | | |
| 6 | I guess you have covered all the major benefits | | | | |
| 7 | Interbull will have direct access to genotypes for R&D as well as routine genomic analyses | | | | |
| 8 | Better detection of genotyping errors because of more relatives available for checks Better detection of subpopulations, so better imputations could be achieved Promote collaboration between genetic evalua | | oulations an | | |
| 9 | Less bilateral exchange agreements necessary. | | | | |
| 9 | 2000 Briational Oxfordings agreements resocceding. | Joint population from "smaller' countries can be a counterpart for Wuro Genomics. | | | |
| 10 | | | | | |
| | | d on genome infor | mation in | | |

The only 'pure' (and most accurate) method of getting genomic EBVs on home country scale without bias.

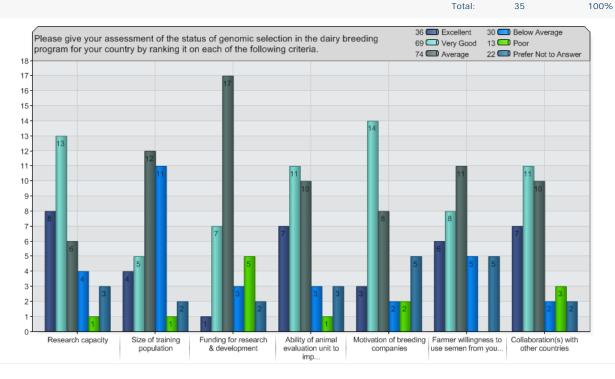
| 4. What are | the main obstacles to, or problems with, IGenoP? | | | | |
|-------------|---|--------------------|--------------|--|--|
| | | Responses | Percent | | |
| | Responses: | 15 | 100% | | |
| | Total Responded to this question: | 15 | 42.86% | | |
| | Total who skipped this question: | 20 | 57.14% | | |
| | Total: | 35 | 100% | | |
| | Graph/Chart function not relevant for this question type. | | | | |
| 4. What are | the main obstacles to, or problems with, I GenoP? | | | | |
| Response | Response Text | | | | |
| 1 | Initial investments made by AI companies in establishing their training populations. As soon as these cobenefits to being involved in IGenoP (training, systems and accuracy of evaluation), then they will become | | greater | | |
| 2 | Susceptibility. The departure point across countries is very different therefore how can that be overcome control of genotypes Is everybody using the same density?. If not, imputation could be an issue. | e?. The feeling of | loosing the | | |
| 3 | Lack of interest of larger countries | | | | |
| 4 | Standardisation of procedures from different countries. | | | | |
| 5 | Convincing bigger countries to join (one unified system under the guidance and management of Interbul | I). | | | |
| 6 | The situation might be that a smal country might change genotypes with a large country not in IGenoP. restriction on the small country from putting their bulls in IgenoP. This might hinder the small country from | | | | |
| 7 | extra time, space and processes required to fully use it | | | | |
| 8 | 1. Steering Commitee is controlled by countries that do not want IGENOP to be developed. The trend is the opposite, AI being at Steering Commitee. Proposals based on minimum number of cows should be coalso have the idea of being a bit ahead of other potencial IGENOP countries3. Some countries not wan of their AIs.4. Interbull having too many tasks?5. Massive female gennotyping database may be too big | onsidered. 2. Med | ium countrie | | |
| 9 | Benefit is reduced if genotypes from main exporting country populations will be missing. | | | | |
| 10 | where data is owned by breeding companies, the ability for the data to be accessed by other domestic p | parties. | | | |
| 11 | Different chip versions. | | | | |
| 12 | Possible own interest of participants (competition). | | | | |
| 13 | Those that made large investments are not ready to share those they want their advantage and at lewant to be sure that no 'outsider' (plant breeders, pharmaceuticals, farmers) becomes a competitor on t | | | | |
| 14 | The large countries will not agree to share genotypes | | | | |
| 15 | Achieving collaboration from all countries, especially the larger population, who control most of the select in several countries the genotypes (as well as dGVs which may flow into national EBVs) are owned by countries and therefore not in the traditional members of interbull's control. Perceived loss of 'control' and loss of usage of the genotypes is seen as the main obstacle. | mmercial breedir | ng companie | | |

5. Please give your assessment of the status of genomic selection in the dairy breeding program for your country by ranking it on each of the following criteria.

| | Excellent | Very Good | Average | Below Average | Poor | Prefer Not to Answer | Total |
|---|-----------|------------|------------|------------------|-----------|----------------------|-------|
| Research capacity: | 8(22.86%) | 13(37.14%) | 6(17.14%) | 4(11.43%) | 1(2.86%) | 3(8.57%) | 35 |
| Size of training population: | 4(11.43%) | 5(14.29%) | 12(34.29%) | 11(31.43%) | 1(2.86%) | 2(5.71%) | 35 |
| Funding for research & development: | 1(2.86%) | 7(20%) | 17(48.57%) | 3(8.57%) | 5(14.29%) | 2(5.71%) | 35 |
| Ability of animal evaluation unit to implement genomic evaluations: | 7(20%) | 11(31.43%) | 10(28.57%) | 3(8.57%) | 1(2.86%) | 3(8.57%) | 35 |
| Motivation of breeding companies: | 3(8.82%) | 14(41.18%) | 8(23.53%) | 2(5.88%) | 2(5.88%) | 5(14.71%) | 34 |
| Farmer willingness to use semen from young genomically selected bulls: | 6(17.14%) | 8(22.86%) | 11(31.43%) | 5(14.29%) | 0(0%) | 5(14.29%) | 35 |
| Collaboration(s) with other countries: | 7(20%) | 11(31.43%) | 10(28.57%) | 2(5.71%) | 3(8.57%) | 2(5.71%) | 35 |

Total Responded to this question: 35 100%

Total who skipped this question: 0 0%



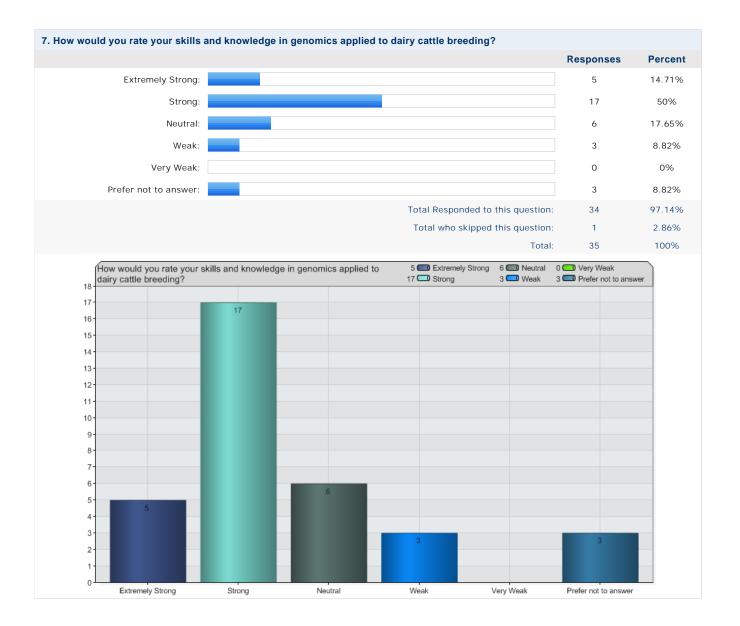
6. What are the biggest obstacles and problems being faced with the use of genomic selection in the dairy breeding programs in your country?

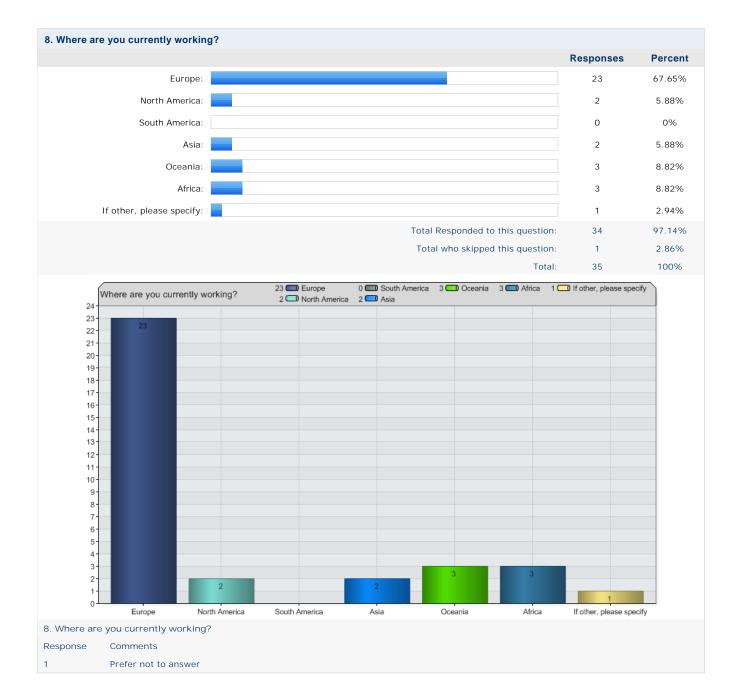
| | Responses | Percent |
|-----------------------------------|-----------|---------|
| Responses: | 15 | 100% |
| Total Responded to this question: | 15 | 42.86% |
| Total who skipped this question: | 20 | 57.14% |
| Total: | 35 | 100% |

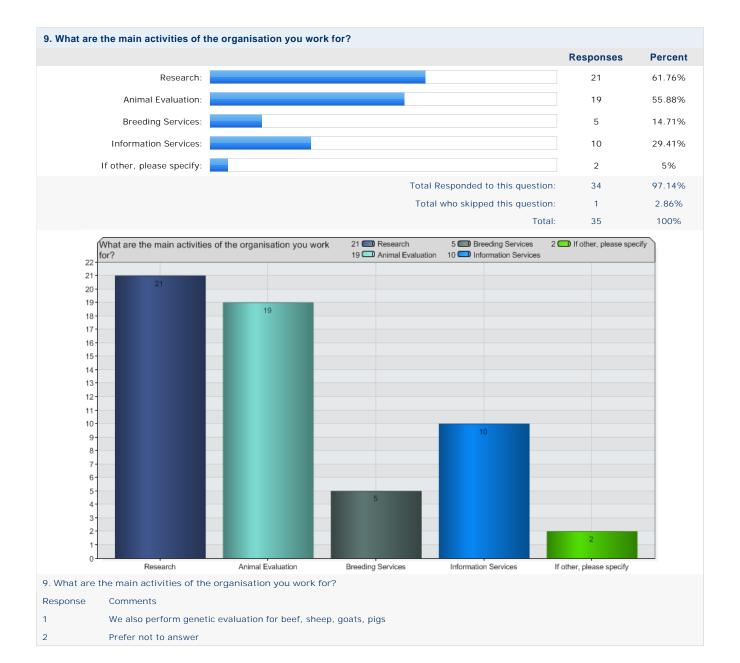
Graph/Chart function not relevant for this question type.

6. What are the biggest obstacles and problems being faced with the use of genomic selection in the dairy breeding programs in your country?

| Response Response Text 1 a small training population 2 Small training population 3 Funding to undertake ongoing research and development, hence the need to avoid duplication in this area. Also, size of training population is a limiting factor which we are keen to build on. IGenoP would help us deliver in that regard. 4 I am not very much involved in the dairy breeding programs however the major problem is who is going to assume the cost of genotyping in a long run. 5 The training population. AZIso the access to DNA from older sires. 6 The lack of knowledge amongst farmers in terms of what genomic breeding values are. This is generated by the interest of breeding companies in making profit. 7 Securing funds to genotype the training population and acquiring software and training to use this methodology. 8 Still in an elementary stage in genomic evaluations, so can not say. 9 The biggest has been the initial funding for settling the reference population what has delayed too much the starting of genomic evaluations but lack of coordination of national research goals with other countries is a loss of resources. European FP7 project might be an opportunity for the future. 10 small populations, lack of research at university level, low accuracy of gebvs for some traits 11 Small training population. No logistics and funding for routine genotyping of selection candidates. 12 As mentioned, the rapid building of an adequate training population and proper funding to equip researchers quick enough. 13 Costly and time-consuming to build a reference population and do all necessary research. 14 Our dairy population is too small | 6. What are | the biggest obstacles and problems being faced with the use of genomic selection in the dairy breeding programs in your country? |
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| 15 Reliability | 14 | Our dairy population is too small |
| | 15 | Reliability |







| 10. Do you | have any other comments? If so, please make them here. | | |
|--------------|--|--------------------|---------------|
| | | Responses | Percent |
| | Responses: | 5 | 100% |
| | Total Responded to this question: | 5 | 14.29% |
| | Total who skipped this question: | 30 | 85.71% |
| | Total: | 35 | 100% |
| | Graph/Chart function not relevant for this question type. | | |
| 10. Do you h | nave any other comments? If so, please make them here. | | |
| Response | Response Text | | |
| 1 | The biggest challenge for IGenoP is to get participating groups appreciate that cattle breeding is a busin resulting in more profits for farmers and industry. Its is not a business for companies looking to make shipping gains. On that basis it is critical that IGenoP is supported and led by individual members on Interbull (& I | ort profit or mark | |
| 2 | Great job! Thank you. | | |
| 3 | Prefer not to answer | | |
| 4 | We will benefit extremely by the IgenoP concept due to the small size of our dairy population and limita capacity. | tions with regards | s to research |
| 5 | Hopefully countries will share more and more, but also protect the investors from new competitors that much investment. | might want to be | nefit without |