BIOMETRICS INFORMATION

(You're 95% likely to need this information)

PAMPHLET NO. # 10   DATE: July 18, 1988

SUBJECT: Results of Biometrics Questionnaire

Biometrics Client Survey questionnaires, which were sent out in June 1987, have been analyzed and the results are summarized in this pamphlet.

Response was good, as 90 of 168 questionnaires were returned. They were returned from the following workplaces:

Workplace	Number of Respondents	Percentage of Total Response
Research Branch	32	36%
Glyn Road	6	
Kalamalka	6	
Cowichan Lake	2	
Red Rock	2	
Other	16	
Regional Offices	28	31%
Silviculture Branch	18	20%
Protection Branch	4	4%
Valuation Branch	1	1%
Information Services Branch	1	1%
Integrated Resources Branch	1	1%
District Offices	2	2%
Wildlife Branch		
(Min. of Env. and Parks)	3	3%

About half the respondents spend more than half their time on research while only 12% spend more than half their time on operational trials. Nevertheless, 68 respondents have been involved in research projects for over 2 years (58 for over 5 years) and 44 have been involved in operational trials for over two years. Twenty-eight respondents have been involved in both research and operational trials for over 5 years. The majority of respondents (88%) have some university education, with more than half completing some graduate work. About a third (32%) of the respondents with Master's degrees and two-thirds (65%) of those with PhD's are in the Research Branch.

The number of respondents who use various statistical techniques and judged Biometrics knowledge is summarized in a table on the next page.

Other techniques used included: non-parametric statistics, time series analysis, analysis of repeated measurements, non-linear regression, gompertz growth models, maximum likelihood, canonical analysis, Ceska-Roemer sorting technique, and linear programming. Respondents indicated that they wished Biometrics had greater expertise in: multivariate analysis, non-parametric statistics, incomplete block designs, time series analysis, hydrological research methods, pest management design problems, quality control and repeated measurement designs.

NUMBER OF RESPONDENTS WHO:

STATISTICAL TECHNIQUE	Use Statistical Technique	Assessed Biometrics Knowledge	Assessed Knowledge Okay or Good
Principles of experimental design	70 (78%)	55 (61%)	55 (100%)
Analysis of variance	70 (78%)	52 (58%)	52 (100%)
Multiple regression	48 (53%)	37 (41%)	36 (97%)
Analysis of covariance and			
parallelism of lines	30 (33%)	21 (23%)	21 (100%)
Sampling designs	56 (62%)	44 (49%)	43 (98%)
Acceptance sampling			
(quality control)	11 (12%)	9 (10%)	8 (89%)
Multivariate analysis	17 (19%)	17 (19%)	13 (76%)
Contingency tables and			
log-linear models	21 (23%)	14 (16%)	13 (93%)
Logistic regression	14 (16%)	17 (19%)	17 (100%)
Other	13 (14%)	6 (7%)	6 (100%)

Biometrics service is requested at least occasionally by 77 (86%) respondents while an additional 9 would like to use the service. Reasons given for not requesting Biometrics service include:

1) Work done by respondent is simple in statistical terms;
2) Biometrics staff are too busy and response time is slow;
3) Biometrics staff are too far away;
4) Respondent's lack of knowledge means that it is hard for the respondent to ask the right questions and to understand the answers given;
5) Didn't know such service was available;
6) Go to other people for advice.

In general, Biometrics service is rated as okay or good. However, 3 respondents felt that the response time was poor, 4 felt that accessibility was poor and 4 felt that the Biometricians were reluctant to spend the time required to make their advice clear. Two-thirds of the respondents indicated that they obtain statistical advice from outside the Biometrics Section, but half of these requests are directed to Research Branch staff with only 29% going outside the Ministry.

Respondents were asked to rate the usefulness of Biometrics activities, with the following results:

BIOMETRICS ACTIVITY	Useful	Somewhat or not Useful	Response
Short consulting sessions			
(on the phone or in person)	70 (78%)	7 (8%)	13 (14%)
Consulting sessions	62 (69%)	7 (8%)	21 (23%)
(longer than half hour)	39 (43%)	28 (31%)	23 (26%)
Progress/final report reviews	31 (34%)	30 (33%)	29 (32%)
Training sessions or workshops	46 (51%)	26 (29%)	18 (20%)
In depth study of a specific problem			
(Biometrics research and development)			
	31 (34%)	28 (31%)	31 (34%)

Training on a one-to-one basis was important to 65 (72%) respondents and 64 felt that training workshops were important. Forty felt that one-to-one training was very important while only 22 felt that workshops were. Comments on the Biometrics Priority List were received from 57 respondents with non-specific positive comments, such as "looks good", received from 24 (42%). Those who commented on the consultation section were pleased to see that consultations were the first priority. Some respondents (8 or 9%) felt that the turnaround time for reviews was too long. Three respondents did not find the list easy to understand especially with regard to the meaning of the target turnaround time. Several respondents felt that the list was unrealistic with present staffing levels so that target turnaround times were unlikely to be met.

General comments were received from 59 respondents (66%) covering a wide range of concerns. Many respondents thought that the questionnaire was a good idea. Protection Branch personnel felt that Biometrics service for their branch was important. One respondent felt the need for a clear statement of who the Biometrics Section supports and in what priority ranking. Concerns with training was a popular topic. Many respondents want to have more training available. Several respondents commented that they had problems answering the questionnaire largely due to lack of experience with the Biometrics Section.

The general comment section was used by many to make suggestions for service improvement. Some of them are:

- put out a series of short readable papers on approaches to experimental design and analysis;
- have someone to handle programming problems;
- have someone to do the actual analysis;
- clarify staff duties and advertise them so that clients know who to go to first;
- continue biometrics seminars;
- make more field visits;
- tour monthly to help people with canned stats programs;
- visit regions and districts;
- consider in-depth projects such as experimental designs for growth and yield studies;
- advertise our presence more.

The Biometrics Section has incorporated many changes as a result of the questionnaire. The Biometrics Priority List is now established and will be presented, along with other comments, in the next edition of the Technical Support Group's Services and Operating Guidelines Booklet. In particular, Biometrics Projects are described, since the questionnaire response indicated some confusion about this activity.

Providing a good consulting service is the first priority on the Biometrics Section. The turnaround time for reviews will remain at 3 or 4 weeks, and, may get longer with present staffing levels and review demand. Regular office hours at the Glyn Road Research Station have been established and annual or semi-annual visits to the Kalamalka Research Station are planned. It is clear that training should be a high priority for the Section. One-on-one training is ongoing during consulting sessions by individual request. Workshop training needs are not well-defined at the moment, so the attached pamphlet will ask you for more details. A SAS/PC workshop is being scheduled for the Fall.

These pamphlets are short readable papers on experimental design and analysis (and suggestions for topics are welcome). Programming problems with SAS can be referred to me. Problems in other languages should be referred to Systems Section Staff. We do not have the resources to run complete analysis except in certain limited situations (see TSG Services and Operating Guidelines Booklet for details). Clarification of staff duties within the Biometrics Section is not currently necessary with only one staff member. However, clarification of differences between the Biometrics and Systems Sections would be useful since our duties are often confused. Basically, all computer-related problems, except those directly involving statistics, should be directed to the Systems Section. It is not practical at this time to continue the biometrics seminars, make lots of field visits or tour monthly. Annual visits to the regional offices are

planned. There are many valuable in-depth projects the Section could undertake and the method for choosing such projects is outlined in the TSG Services and Operating Guidelines Booklet. And lastly, but not least, I believe that these pamphlets are sufficient advertisement at the present time.

The Biometrics Section appreciates the time and effort taken by those who completed the questionnaire and have incorporated some of the changes recommended. It has provided us with useful information and comments regarding future service.

Thank you,

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