An attempt was made to examine the job satisfaction traits of the scientists employed at the National Dairy Research Institute at Karnal and its three Regional stations at Bangalore, Bombay and Kalyani, to afford clues for the general dissatisfaction, if any, in scientific community and decline in productivity in relation to increasing age or after stay in the same job for 5 to 6 years.

A questionnaire was prepared and presented. A scoring key for the qualitative and quantitative items on the questionnaire was devised.

The subjects were 162 male and 3 female scientists. Fifty three scientists were Ph.D., 64 M.Sc., 29 B.Sc. and 19 holders of Indian Dairy Diploma or other diploma. The mean age of the scientists was 38 years and 93 percent of the sample had an experience of more than 3 years. The mean job tenure was 10 years while the present job tenure was 6 years. The mean annual pay was Rs. 12, 500.

The specific objectives of the study were as under:
1. To assess the level of job satisfaction of the various categories of the scientific workers.
2. To bring out association between the level of job satisfaction and some personal traits like pay scale, status, education,
sex, environmental factors, time spent on job, security, area of specialisation, experience, number of jobs held etc.

3. To locate reasons for the variation in the level of job satisfaction

4. To find out reasons for choosing this particular vocation of dairying (was it preplanned or the person hit upon it by chance).

The mean job satisfaction score of the respondents was 112.37 against the maximum of 180. Respondents scoring between 50 to 99 on the scale formed the low satisfaction group (N 17), those scoring between 100 to 129 formed the average satisfaction group (N 87) and those between 130 to 179 were the highly satisfied ones (N 61).

Scientists were further divided into three categories according to the nature of work research, teaching and extension. There were 116 research workers, 24 teachers, 22 extension workers and 3 administrators. The correlational and path analyses were carried out between the personal traits and job satisfaction, personal traits cum job satisfaction variables and job performance for all the four groups. Some of the important conclusions of the analyses are highlighted below:
1. Scientists put more hours at work are better achievers and by virtue of that they are heard in the institution with more credence and value.

2. The researchers scale of pay and education were found to be highly correlated ($r = .54$) which helps to infer that the researchers with higher pay scale were those who also had higher level of education and their participation in the affairs of the institution was largely because of their education and pay scale.

3. The researchers having higher formal education had a lot of say in the affairs of the institute. It seems that the researchers having high education and better involvement in research work were heard more honourably and effectively in the institute.

4. Teachers with higher pay scale and higher level of education participated in the institutional affairs much more than others.

5. Teachers who are higher in pay scale hierarchy are also more qualified (educationally) and due to both of these exert more influence in the organisation.

6. Extension workers with only one specialised area had greater participation in the institutional affairs. Extension workers though younger in age because of their senior position, higher educational level and higher pay scale, participated in the institutional affairs.
7. The scientists older in age, experienced less congenial work environment than scientists younger in age.

8. Less experienced scientists felt the work environment favourable while the more experienced felt that the environment was not conducive for research.

9. Scientists with more than one area of specialisation did not consider the work atmosphere congenial for research.

10. Scientists who were highly educated also spent more hours in work because of their interest in work. Other extraneous factors like pay etc. did not matter with them.

11. Teachers because of their pay scale, specialised area and higher educational level sought satisfaction in work and as a result showed better involvement. They derived self satisfaction out of the job and described the work environment as conducive to work.

12. Scientists who work longer hours receive recognition inside and outside the institute.

13. Scientists and teachers who are specialists in some field and are highly educated had affiliation with their field of interest. As a result of this affiliation, they devoted more time to work.

14. Research scientists with less experience and younger in age were found to be more satisfied with their jobs.

15. Area of specialisation of the teachers did not contribute to the degree of satisfaction experienced by them. Those teachers who had specialisation in Dairy science or agriculture did not report more satisfaction than teachers with
specialisations in other fields.

16. The formal educational attainments of the scientists make considerable contribution to their rationality in selection of research problem.

17. Scientists having higher degree of job satisfaction which was due to their greater participation in the institutional affairs, their positive feelings about the work environment and their better recognition in the scientific field also concentrated more on research as revealed by the hours spent by them in work and also relied on more sources for the selection of research problem. Their young age and higher educational level contributed towards their performance on the sources of selection of research problem.

18. Scientists who were in higher pay scale and who participated more in the institutional affairs because of their senior positions also performed better as far as their publication performance was concerned.

19. Less experienced teachers but with higher educational level and putting in moderate hours of work published more papers than their more experienced counterparts.

20. The study revealed that it is not always the satisfied scientist who will spend more hours on the job and would be engaged in job related activities. No significant relation-
ship was found between the number of hours spent on the job and research output in the form of research papers published. Majority of the respondents in the institute under study were putting in the same 30-40 hours of work in a week.

21. In case of scientists mainly engaged in research who had a higher score on recognition also showed better performance they thought research publications to be a good source of recognition. Hence, a significant correlation was found between recognition and research publication.

22. The variable weekly hours correlated with recognition in case of research workers and teachers indicating thereby that job involvement contributed towards recognition aspect of job satisfaction. Scientists devoting more time in work were better known inside as well as outside the institute than scientists devoting less time.

23. Age and area of specialisation affected negatively towards environment score in case of research workers. Older scientists scored less on this aspect of job satisfaction.

General Areas of dissatisfaction and suggestions

When the questionnaires were probed further, some of the scientists had listed certain areas from which the discontent
mostly emerged. Some of the scientists having good training, excellent academic record and highly productive as far as their research publications were concerned, were found to be the dissatisfied scientists. They complained that they were misfits in the general administrative set up. They complained of weak leadership with lack of purpose, sincerity and seriousness in the various programmes being pursued at the institute. Some had written about the favourtism practised in procuring higher jobs and lack of promotions.

1. Looking to the type of scientists who are dissatisfied, these scientists should be given more avenues to release their creativity, energy and computability. They should be given more participation in major decisions and should be asked for new ideas regarding research, teaching and extension activities.

2. If they have specialised skills, they should be motivated to work in their choice field of specialisation. They should be given adequate facilities and enough freedom to select their problems. They should be sent on special invitations to other institutes.

3. Lack of freedom in the work environment may prevent a scientist from making use of his talents and abilities.
However, if a scientist has capabilities higher than the job requirement, he may react to the situation by either withdrawing from it or using other kinds of defences such as aggression, non acceptance of responsibility and rationalisation. It is for the management to see the problems of these talented scientists by entrusting them more challenging work to perform.

4. Generally, when scientists reach the age of 40-50 in their mid career as revealed by the mean age in case of scientists in this institute (38 years), the work morale is generally low. A planned programme of refresher courses could be arranged at this time. Some research workers could be shifted to administrative or teaching jobs. But if proper motivation is given, effect of age on performance could be minimised.

5. Scientists may be encouraged to publish more research papers and reports with their names as authors.

6. Young Ph.D's who are in sizable number in this institute as the higher educational level of our research scientists suggests, should be attached to some senior scientists who may act as their guides when needed, for at least 2-3 years, till the time fresh Ph.D.'s gain confidence to start work in their field of choice. Each of these scientists should try to master at least one area. Later on, these specialists may form a team and select a leader among themselves. If
the scientists willing to join a particular team, he should be allowed to change from one discipline to another.

In conclusion, it can be said that seeing the overall satisfaction job of the researchers, teachers and extension workers in the institute, the situation is not discouraging. Job satisfaction is not due to any one factor but it is the resultant effect of a number of factors within the organisation, interpersonal relations of coworkers, superiors and the subordinates, the individual's own needs, aspirations and motivations. It is not a sum total of all these factors but a unique interaction and reaction process which determines job satisfaction of the employees.

The overall job satisfaction score in the institute under investigation is not low. An average of 112.37 against the maximum of 180, but to maximize the job satisfaction level, one needs to explore further almost all the areas of organisation because each may have something to contribute to the total job satisfaction score. The exact degree of contribution of each factor may be difficult to ascertain because the respondents may not themselves be aware of the way and the degree to which different variables affect them. But their general problems could be solved and dissatisfaction on certain areas could be minimized, if not properly removed.