



NC 4/68

INTERNATIONAL BIOLOGICAL PROGRAMME

SECTION PCT

Working Group Section PT : Nitrogen Transformation

The Meeting was held at the Australian Academy of Science, Canberra, 15 November 1967.

Present:                    Dr. J.W. McGarity (Convener)  
                                  Dr. D.J. Greenland  
                                  Dr. A.E. Martin

Apologies were received from Dr. E.F. Hanzell and Dr. R. Wetselaar.

1 Convener

Dr. McGarity was elected Convener of this Working Group to replace Dr. R.J. Millington who has accepted a position in U.S.A.

2 It was agreed that Dr. R. Wetselaar should be invited to join the Working Group.

3 Terms of Reference

It was agreed that to fulfil the major purpose of IBP . . . the section of nitrogen transformation should have as its major objective investigations concerned with the N status of natural communities in which economic productivity is to be achieved and of agricultural systems.

4 To attain this objective, it was agreed that the net and gross changes, and the direction of change, in the total N of particular ecosystems should be measured.

Such measurements here in Australia and elsewhere are long overdue and are essential to an understanding of long term productivity of any system.

That such measurements have not been generally made is the consequence of sampling and methodological problems associated with field experimentation.

5 The committee proposes therefore that as a first objective in the implementation of co-ordination of research activities on N status and transformations there is a need for establishment of a sound approach to field experimentation. This requires an assessment of methods and techniques already available and their possible modification and adaptation to field systems under examination. Such an assessment would be made in relation to

- i Net and gross changes in N-status in soil-plant communities
- ii The discrete transformations within the N-cycle providing these are directly related to field situations.

To implement this, the committee proposes in the first instance to review and summarise the nature of methods and techniques currently available and indicate areas where there is a need to devise new or modify existing methods. It is further proposed that this review will be published in the A.J.S.

Once this has been achieved, it is believed that the committee will be in a position to advise on the manner in which a number of projects already being undertaken particularly in isolated transformative studies can be strengthened to more properly provide information on the N-status of the system as a whole.

The immediate steps which the committee proposes are -

1. Preparation of short Review on Methodology
2. Conference on Methodology, of field experimentation with reference to N-status of soil-plant systems. (Some time in 1968).

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