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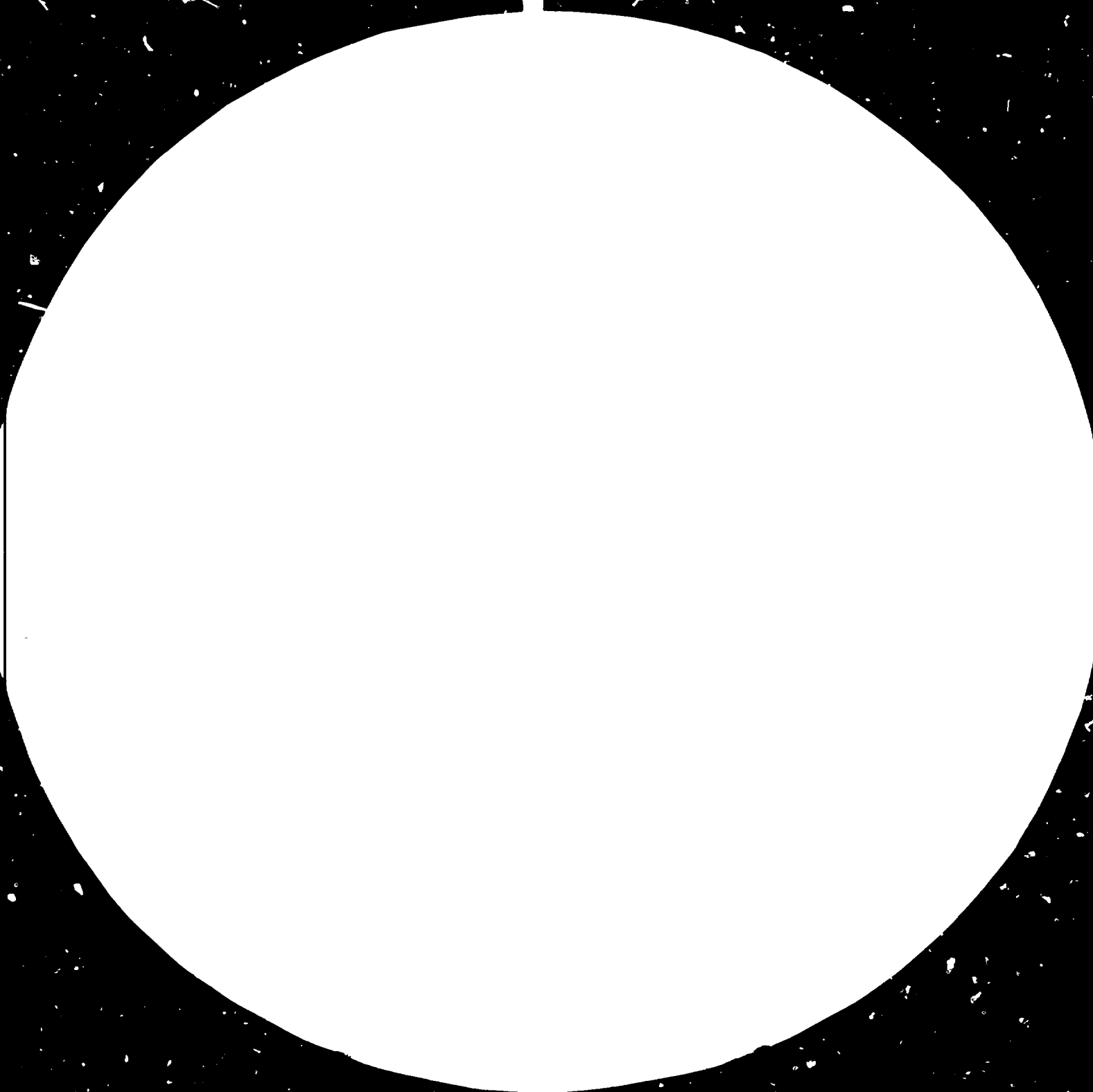
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Resolution test patterns for 1.0, 1.1, 1.25, 1.4, 1.6, 1.8, 2.0, 2.2, and 2.5 cycles per millimeter.



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AIDE MEMOIRE

CONSULTATIONS ON THE IMPLICATIONS OF ADVANCES IN GENETIC ENGINEERING FOR DEVELOPING COUNTRIES, Vienna, 1981

Vienna, 4-6 February 1981

I. Background

The currently emerging technological breakthroughs have important implications for the growth and life-styles of the developed and developing economies. In the words of the report of the United Nations Conference on Science and Technology for Development:

"There are also a number of the rapidly developing fields in science and technology which are going to have a significant impact on the longer term development problems which will face humanity in the years ahead. These include the broad spectrum of activities relating to satellite technology, computer communications, micro-processing and electronics, and information science in general. Other areas which are attracting growing attention are activities in the field of non-conventional generation of energy, particularly in thermal nuclear fusion research, solar energy and the use of alcohol as fuel; in the field of biology, including bio-technologies, genetic engineering, enzyme technology and in the marine sciences, including ocean eco-systems, etc. Research and development in these areas may well provide major breakthroughs which could have great significance for humanity in both developed and developing countries. All these developments, especially the new ones, should be pursued, evaluating attentively the risks for health and environment and preventing their misuse. Developing countries should also build or strengthen national and/or regional research centres in these or other such frontier areas to enable them to participate fully in the march of science, leap-frogging where possible."

The relevance of such technology breakthroughs for developing countries needs greater attention. The potential as well as the possible adverse

effects of such technologies have to be examined. In particular, there is a need to identify those elements of technological advances that could contribute to a more rapid fulfilment of the basic needs of the masses of the population in developing countries. Moreover, the conventional route for developing countries to benefit from technological breakthroughs is through their initial adoption in developed countries in a form most suited to them, rather than to the developing countries themselves. The question has to be asked whether the major advances of technology could not be applied direct in line with the needs of developing countries. It should also be remembered that such technologies in developed countries will be increasingly capital-intensive while in many developing countries with mounting problems of unemployment it is the labour-intensive technologies that have to be applied.

There is a need to sensitize policy makers, senior officials and in certain respects the scientists and technicians in developing countries to the implications of the technological advances that have just emerged or are in the offing. Such a sensitization, based on in-depth examination of the potentials and implications of the technologies from the viewpoint of the developing countries would enable a more conscious and rational choice of technologies from now on and also planning the requisite technological capabilities to apply such technologies, wherever appropriate.

UNIDO has initiated in-depth studies on the implications of emerging technological breakthroughs for developing countries in six selected subject areas. The studies in those sectors are expected to provide the basic material for an international meeting, to be called International Forum on Technological Advances, where the implications for developing countries will first be discussed by experts and the policy issues arising therefrom examined in a meeting of ministers. Based on the results of the technical and ministerial-level meetings further follow-up measures will be undertaken.

The present consultations specifically relate to genetic engineering and are part of the overall programme of UNIDO on technological advances.

II. Consultations

The United Nations Industrial Development Organization (UNIDO), the International Federation of Institutes for Advanced Study and the Club de Genève are jointly organizing consultations with eminent experts on the implications of advances in genetic engineering for developing countries to be held in Vienna on 4-6 February 1981 at the UNIDO headquarters in the Vienna International Centre. The objective of the meeting is three-fold: first, to examine the implications of the advances in genetic engineering for the developing countries in four selected industrial branches; secondly, to outline the nature of technological capabilities to be built up by developing countries in order to take advantage of such advances; and thirdly, to examine the possibility of establishing a broad-based international research facility which would provide an opportunity for scientists and technologists from developed and developing countries to work together on the application of scientific advances in the field of genetic engineering to industrial branches.

The consultations will be attended by distinguished scientists and technologists in this area. The meeting will also provide an opportunity to review the state-of-the-art, the achievements and the future prospects in this field. The aspects of application and commercialization in selected sectors of activity would also be broadly touched upon.

III. Programme

The consultations will cover the following subject areas:

1. Scientific advances;
2. Application and commercialization (if possible);
3. Establishment of an international research facility;

which will be considered in relation to four selected industrial and industry-related fields:

1. Energy (bio-mass, fuel alcohol);
2. Fermentation industries including drugs and pharmaceuticals;
3. Fertilizers, pesticides and plant genetics;
4. Processing of minerals.

IV. Documentation

The following documentation will be circulated:

- Genetic Engineering: Technology and its Future Implications;
- A paper on various elements needed for the establishment of an international research facility.

V. Financial and Administrative Arrangements

UNIDO will:

- Arrange roundtrip air economy transportation between the airport of departure in the home country and Vienna;
- Pay in Vienna a daily subsistence allowance at the prevailing UN rate for the duration of the meeting plus travel days and an extra day's allowance for terminal expenses;

The participants will be required to bear the following costs:

- All expenses in their home country incidental to travel abroad, including expenditures for passport, visa, inoculations and other miscellaneous items as well as internal travel to and from the airport of departure in their home country.

UNIDO will not assume responsibility for any of the following costs which may be incurred by the participants while attending the meeting:

- Compensation for salary or related allowances for the participants during the period of the meeting;
- Any costs incurred with respect to insurance, medical bills and hospitalization fees;
- Compensation in the event of death, disability or illness;
- Loss or damage to personal property of participants while attending the meeting.



