

Fertilizer use by crop

Utilisation des engrais par culture

Utilización de fertilizantes por cultivo

Fourth edition
Quatrième édition
Cuarta edición



IFA

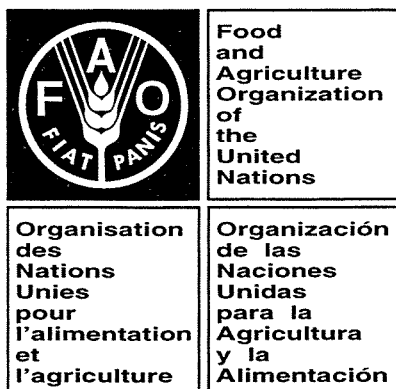
IFDC

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**IFA – International Fertilizer Industry Association
Association internationale de l'industrie des engrais
Asociación Internacional de la Industria de los Fertilizantes**

**IFDC – International Fertilizer Development Center
Centre international de développement des engrais
Centro internacional de promoción de los fertilizantes**

**Food and Agriculture Organization of the United Nations
Organisation des Nations Unies pour l'alimentation et l'agriculture
Organización de las Naciones Unidas para la Agricultura y la Alimentación**

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INTRODUCTION

This is the fourth issue of the publication on ***Fertilizer Use by Crop*** produced jointly by the Food and Agriculture Organization of the United Nations (FAO), the International Fertilizer Development Centre (IFDC) and the International Fertilizer Industry Association (IFA). The first issue was published in 1992 and there after every alternate year.

The report generated a large amount of interest because of a lack of published information on application rates and use of fertilizer by crop. The information in this report is useful to agricultural researchers, fertilizer marketing managers, international agencies, policy makers and various government agencies. It is also very useful for the analysis of environment-related issues such as input-output balances of plant nutrients in soils. The response to these reports indicated that there was considerable need for this type of information. In order to broaden the scope of this study and to avoid discrepancies in the data, FAO, IFDC and IFA agreed to conduct similar surveys in 1998 and to issue another joint publication.

The data on fertilizer use by crop contained in this publication relate to the year ending 1996-97. Thus the publication contains data for the available last one year for each country covered in the survey. In order to broaden the coverage of the data and to avoid discrepancies, these data were compiled from the data collected by the FAO, IFDC and IFA through the following sources:

1. FAO questionnaires sent to member countries either through FAO Representatives or directly to government agencies;
2. IFDC questionnaires sent to contacts throughout the world, including agronomists, economists and other participants in various fertilizer training courses, professional meetings or other seminars conducted by IFDC;
3. IFA questionnaires sent mainly to industry members.

The three organizations held a joint meeting in Rome in March 1998 to review the data received and to select the data for publication. The published FAO statistics on country-wise total fertilizer consumption and crop areas were helpful and, in many cases, used as a guide to determine the reliability of the response. The data shown in this publication represent the consensus of the group. It is suggested that these data should be taken as to reflect the general magnitude rather than an exact measurement.

In this report attempt has been made to present data that make it clear whether application rates are the average for the entire crop area (fertilized and unfertilized) or the average for the area that is fertilized. Since data are estimated differently by various countries, it was not possible to adopt a uniform presentation for all countries and to provide a comprehensive global view. In a few countries where updates were not available, data from previous reports has been repeated to provide a more comprehensive picture. The main characteristics of these data are given below to facilitate their interpretation:

1. Only a very limited number of countries have government agencies that collect such data. In many cases coverage is restricted to a few major crops;
2. not all countries report data for the same year;
3. multicropping is practised in many countries which makes it difficult to quantify the amount used on each crop. Moreover, some countries made estimates for a group of crops (i.e., cereals) rather individual crops such as wheat and corn;
4. double cropping is practised in some of the countries. In many cases, most or all of the fertilizer is applied to one crop, but the fertilizer benefits both the crops.

Further, in order to have a better understanding of the total quantum of fertilizers consumed in each country, the estimates of the N, P_2O_5 and K_2O consumption made by FAO/World Bank/UNIDO and the Industry Working Group on Fertilizers are included. The sum of fertilizer use for all crops for a given country may be different from the estimates made independently by the Industry Working Group; the main reasons being the time lag between the estimates, rapid changes in the economic conditions (e.g. countries in East Europe and the former U.S.S.R.), inadequate data of fertilizer use by crop in many countries, annual variations and other factors that influence fertilizer demand.

This publication presents data for 101 countries on fertilizer use by crop expressed in plant nutrients for nitrogen (N), phosphate (P_2O_5) and potash (K_2O). Data on the application rates, total cultivated area, percentage of area fertilized and total consumption by individual crop are also shown.

FAO, IFDC and IFA gratefully acknowledge the assistance of all those who contributed to this publication and welcome suggestions from readers for further development and improvement.

DEFINITIONS USED IN THE TABLES

TOTAL AREA (1000 ha) refers to land cultivated with the crop listed only.

PERCENTAGE AREA FERTILIZED (% Fert.) refers to the proportion of total area under a certain crop receiving fertilizers.

RATE (kg/ha) refers to the amount of fertilizers applied to one hectare of a crop during a season (application rate).

AVERAGE (Aver. kg/ha) refers to national average application rate for the relevant crops.

CONSUMPTION (1000 Mt) refers to the amount of nutrient used on individual crop. The total fertilizer consumption for a given country was obtained by summing up quantities used on the crops listed only and will, therefore, differ from the total country' fertilizer use as shown in the FAO Fertilizer Yearbook.

Figures may not always add up to the totals given due to rounding.

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