

# Comments On Seeding Rates From Proposal Values and Computed Values in Asia and Middle East Countries

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## 1. INTRODUCTION

In this paper we study and review the seeding rates in detail included in the electronic publication "Technical Conversion Factors (TCF)" prepared by the Statistics Division and posted on the FAO web site. It is required to study and to comment the seeding rates of the publication for Asian and Middle East countries.

We first check the proposal values of seeding rates on TCF reported from each country in Asia and Middle East. And then, we recommend more consistent and reliable data for the seeding rates of agricultural crops with clear explanation and references for recommendation. With recommendation data, we find some statistical characteristics of the seeding rates, and provide some guideline for the research on seeding rates.

## 2. SOURCE DATA OF SEEDING RATES

The data shown in the TCF publication contain the information received in response to a questionnaire sent to member nations.. Variables in TCF are seeding rates, waste of supply, extraction rates, birth rates, take-off rate, live weight, etc. All data relate to national annual averages for the five-year period, 1992-1996.

By the definition of FAO, the seeding rates is defined by the amounts of the commodity concerned, expressed in kilograms per hectare, used for sowing purposes; not only for crops harvested dry, but also for crops harvested green for fodder or food. For vegetables and melons, figures under this heading generally relate to vegetables and melons seeds, and for fruits and berries, to number of plants per hectare.

To study the seeding rates on TCF report in detail, we first need to have accurate figures. To check the numbers, we will use three ways: FAO Statistics DB, past report on TCF, and expert' s opinion. FAO has a statistics database where basic and derived agricultural statistics are collected. There is a report on TCF published by FAO; Food Balance Sheets 1975-77 Average and Per Caput Food Supplies 1961-65 Average 1967 to 1977, FAO. We may refer to the report to screen the proposal values of the seeding rates. By referring to past report, we can study the changes between 1970' s and 1990' s of the seeding rates in Asia and Middle East region. We put a code for region(1=Asia, 2=Middle East) in all data set. If we want to study the seeding rates by region, it is not difficult because each region is a subset of our study.

After data screening for seeding rate has completed, we will study the variables in detail. We will try to figure out what basic statistical information is involved in the data. From the results, we may present some guidelines for the seeding rates. We will concentrate on the extreme value of the seeding rate. We try to explain why the value of variable appears in the country. From the above whole process of study, we will provide which information is necessary and insufficient to get correct data for seeding rate.

## 3. SCREEN PROCEDURE OF SEEDING RATES DATA

First, we will check the proposal value of seeding rate reported from each country on TCF report using the past data for the average of 1972-1977 and the computed values from FAO DB if data is available. Secondly, we will provide some statistical information (maximum, minimum, average) of the seeding rate.

## 4. FINDINGS AND RECOMMENDATIONS

Only in Nepal, seeding rate for popcorn appears. It is better to delete this commodity or include in maize. Triticale only appears in China. Canary seed and mixed grain only appears in Saudi Arabia.

Proposal value from each country is not the same to the computed value from FAO DB. Computed value is calculated from the average of 1992-1996. But some countries look like to use the recent year's data or different time period when they report. So, if computed value is available and reasonable, it is better to use it.

The following two tables represent the summary statistics of seeding rate of cereal commodities for proposal values and recommendation values (from computed values from FAO DB and past reference).

**Seeding Rates for Cereals(Proposal value for 1992-1996)**

COUNTRY	WHEAT	RICE	BARLEY	MAIZE	RYE	OAT	MILLET	SORG	BUCK	CEREAL
		PADDY						HUM	WHEAT	NES
Max	290	295	240	391	270	248	100	60	900	261
Min	79	29	9	15	69	40	10	5	60	19
Average(Kg/HA)	153	99	124	57	151	134	25	29	229	100

**Seeding Rates for Cereals(Recommendation value for 1992-1996)**

COUNTRY	WHEAT	RICE	BARLEY	MAIZE	RYE	OAT	MILLET	SORG	BUCK	CEREAL
		PADDY						HUM	WHEAT	NES
Max	287	300	232	407	270	256	106	60	450	256
Min	81	29	35	15	56	40	10	10	31	20
Average(Kg/HA)	150	104	114	63	147	135	26	27	124	90

## 5. SUMMARY AND SUGGESTIONS

Taking into account the findings explained in the previous sections, the following suggestions can be made.

- 1) There are some structural problems in TCF report.
- 2) We need data consistency: some figures come from other sources. Need to provide the sources of the data.
- 3) There were many mistakes from many countries. Countries should strive to collect and report their figures in conformity with the guidelines and recommendations given by FAO, as regards concepts, definitions and coverage of the data.
- 4) The incompleteness and inaccuracy of the basic data are the major problem encountered in developing countries. Statistics may not be available for all commodities needed. And even where the statistics are available, they are not always complete or reliable.

## REFERENCES

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