INFORMATION SYSTEMS FOR RURAL ACTIVITIES

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1 - SUMMARY :

A great deal of attention has been devoted to information systems and computers nowadays in Egypt. This attention is limited till now to the industrial and commercial activities i.e. the information systems concerning the agricultural activities are still almost negelected.

In this work, the nature of information associated with the agricultural activities at Menoufia Governorate as a case study are investigated.

Agricultural supplies such as machinery, fertilizers, insecticides and seeds are characterized by the multiplicity of models and sources of supply, moreover the distribution of these supplies is managed centrally.

Systems of work inside the agricultural sector at Menoufia Governorate are studied and some modifications for the present manual information system are suggested. In addition, a coding system is given to facilitate the data handling for both manual and computerized systems.

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It is to be said that converting manual systems into computerized systems is a matter of economy. In addition computers need a certain level of literated people to deal with. Therefore it is not recommended to mechanize all information at Menoufia Governorate and confine mechanization to some central data concerning the statistics and inventory.

2 - INTRODUCTION :

It is a fact that the last few years withnessed a revolutionary development in the field of information systems.

In the broadest sense information has been defined as that which is communicated or as a patterned relationship among those events which add to knowledge or intelligence and can be evaluated in terms of their relevance for decision making.

Common to all information systems are seven functions which occur in varying degrees of significance and intensity :-

(1) - Determination of information need.

(2) - Data collection.

(3) - Data or information reduction.

(4) - Data or information storage.

(5) - Data processing or information generation

(6) - Data or information transmission.

(7) - Information use.

A computer provides a new dimension of data processing and allows much more sophisticated and imaginative systems of information flow to be developed. It can do work faster and more economically than any other equipment. It is more accurate than people and it can easily perform operations previously considered impractical, if not impossible, in the area of research and analysis. The electronic computer offeres rare apportunity to expand the scope of current mechanized information flow.

Unfortunately data mechanization in the field of rural and agricultural activities is almost neglected in Egypt. Therefore, the research workers suffer a lot of troubles when handling this subject. They cannot find sufficient references in addition they difficulty find a person who can answer the arised questions. Moreover, the computer language applicable to this subject is so complicated and so difficult to learn. That is why this work does not include a developed computer program.

3 - Case Study :

Menoufia Governorate is taken as our case study since it is one of the most important governorates in Egypt in

the field of agriculture. The agricultural and rural acti-
vities in Egypt are characterized by the centralization of
decisions and distribution of agricultural supplies and even
in the determination of the structure of crops every season.
This of course enlarges the size of information handled by
different management levels up and down beginning with the
ministry and ending with the agricultural cooperative socie-
ties.

The present manual information systems for some rural
and agricultural activitiesa are studied. This work inclu-
des the data sequence for repairing an agricultural tractor
as an example. In this procedure, the flow chart with sta-
ndard symbols is illustrated. A computer center is suggested
to be introduced to the system for data storage and retrie-
val.

4 - Coding System :

A coding system is proposed in order to facilitate
the manual or mechanized handling of the data. This system
includes a coding letter for Menoufia Governorate, the letter
is(M). The system also includes code number for the 8 centers
of the Governorate and code numbers for the villages belonging
to each center. In addition the system involves coding letters
for the names such as fertilizers, insecticides, seeds,tractors,
...., etc. and coding numbers for the types of each of these
items.

Procedure of information flow :-

Responsible section	Job description
Agricultural Coopertive Society	1 - Making a council meeting report concerning agreement for repairing the tractor(two copies)
	2 - Making an Agric. Cooper. Society Balance notification (one copy).
Agric. Cooper. Society Manager	3 - Signing the two copies of the council meeting report
	4 - Signing the Agric. Cooper. Society Balance notification
Governorate Agric. Province (Mech. workshop)	5 - Making a primary estimation for repairing the tractor dealt with (three copies).
	6 - Making an issue order for getting the spare.parts from the Centeral Cooperative store (three copies).
Mechanical Work-shop Manager	7 - Signing the two copies of the primary estimation.
	8 - Signing the three copies of an issue order.
Central Cooper. store(accounting section).	9 - Paying the spare-parts price
	10 - Making a money receiving receipt (two copies).

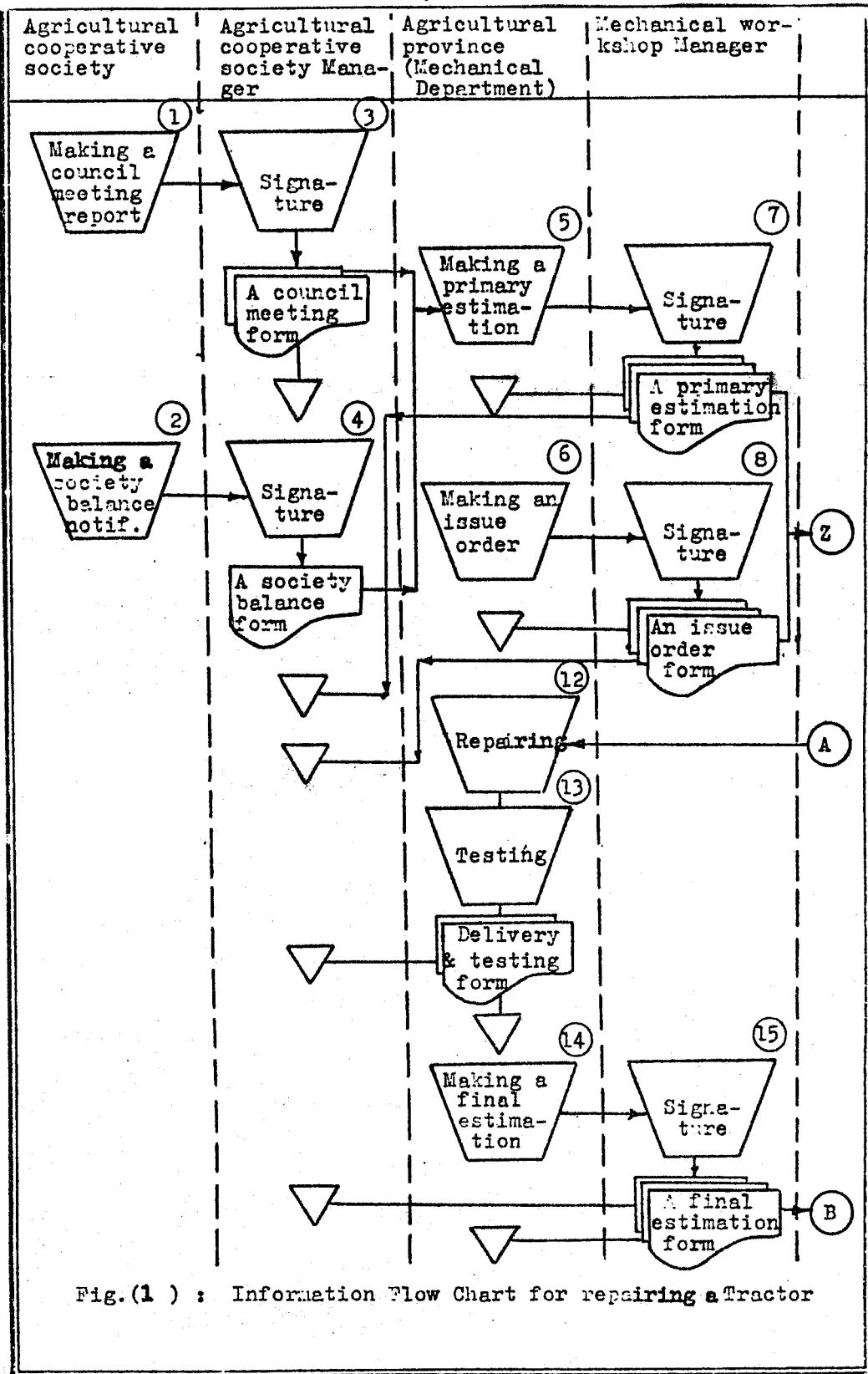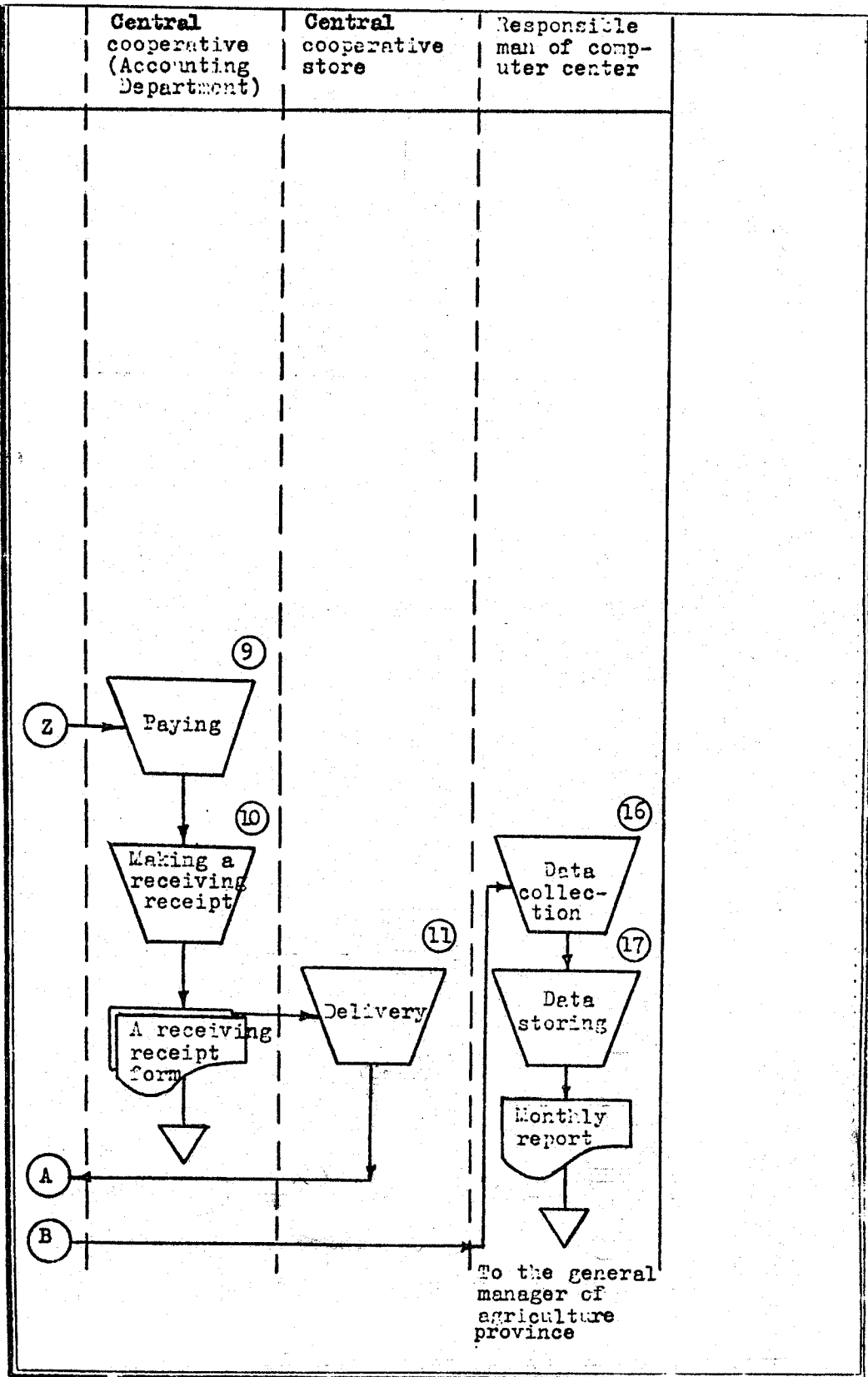| Central Cooper. store	11 - Delivery of the required spare-parts.
Mechanical workshop	12 - Making the needed repairing process.
	13 - Making a test for the repaired tractor due .o a delivery and testing report (two copies).
	14 - Making a final estimation form (three copies).
	15 - Signing the final estimation form.
Responsible Man of Computer Center.	16 - Collection of data about the repairing process such as : tractor type : total cost : Date :
	17 - Printing a monthly report to determine the total revenues and evaluation of workshop activity.

Fig.(1) : Information Flow Chart for repairing a Tractor

Central cooperative (Accounting Department)	Central cooperative store	Responsible man of computer center	

⑨
Paying

Z →

⑩
Making a receiving receipt

A receiving receipt form

Delivery ⑪

⑯
Data collection

⑰
Data storing

Monthly report

A ←

B →

To the general manager of agriculture province

To show how this coding system operates, the following
example is given :

The code M 325I02 means that the data available belo-
ngs to the insecticide of type "CHOLORDINE" at the village
"Meet El-Ezz" of the center "QUESHA".

The explanation respectively is that :

M   stands for Menoufia,

3   stands for the center no. 3 of the Governorate which is
     "QUESHA",

25   stands for the village no. 25 of this center which is
     "MEET EL-EZZ",

I   stands for insecticides and

02   stands for the type no. 2 of the insecticides which is
     "CHOLORDINE".

5 - Conclusion and Recommendations :

It can be easily concluded from this work that the di-
fferent activities of the rural sector including agriculture,
imply an extensive quantity of data and information. Data
collection, processing, storage and retrieval concerning the
rural sector have not been the objective of research workers
or even the people of practice in Egypt.

The methods of handling data in that sector are still
manual and this in fact is not bad. But the bad thing is

that the manual systems are not implemented according to
the very simple scientific rules which prooved a great
sucess in the practical field.

It is recommended that the information systems for
rural activities at Menoufia Governorate may be reviewed
taking into consideration the modern techniques which save
money and effort and guarantee the perfection of management
of works. One of the most important proposals in particular
is to establish a computer center to serve different sectors
of activities in Menoufia Governorate one of which is the
rural sector.

For future research work, it is recommended to deal
with the computerization of data base in detail, giving
the computer programs suitable for data processing and ret-
rieval in our considered field.

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