
**Electronic data interchange between
information systems in agriculture —
Agricultural data element dictionary —**

Part 1:
General description

*Échange de données informatisé entre systèmes d'information en
agriculture — Dictionnaire de données agricoles —*

Partie 1: Description générale



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 11788 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 19, *Agricultural electronics*.

ISO 11788 consists of the following parts, under the general title *Electronic data interchange between information systems in agriculture — Agricultural data element dictionary*:

- *Part 1: General description*
- *Part 2: Dairy farming*
- *Part 3: Pig farming*
- *Part 4: Poultry farming*
- *Part 5: Non-animal stationary application*

Annex A forms an integral part of this part of ISO 11788. Annexes B and C are for information only.

Introduction

Standalone computers on the farm require that data must be manually entered and collected from the different computers. This is a laborious task which becomes superfluous when the computers are interconnected and able to communicate with each other automatically to share and exchange information. Information exchange means data transport between the management computer on one side and each process computer on the other side.

An agricultural data element dictionary (ADED) consists of data elements that may be used in the agricultural sector to exchange data electronically. ADED is closely linked to agricultural data interchange syntax (ADIS), which is a syntax used in the agricultural sector to exchange data electronically. ADED in combination with ADIS makes electronic data interchange possible.

In a data element dictionary all data elements are described in a unique way. Each element is uniquely identified by a data dictionary number (DD number). Data dictionaries for data exchange between management computers and process computers may be subsets of larger data dictionaries.

The standardization of on-farm data interchange between management computer and stationary process computers consists of an ADIS and an ADED. ADIS is described in ISO 11787. A general description of ADED is given in this part of ISO 11788, the other parts of ISO 11788 describe data dictionaries for different fields of application.

This part of ISO 11788

- describes the general structure of an agricultural data element dictionary;
- lists the attributes of data elements and entities;
- gives the header structure (an entity that is used in all data interchanges, independent of the field of application).

NOTE — The term "process computer" can also be read as "datalogger".

Electronic data interchange between information systems in agriculture — Agricultural data element dictionary —

Part 1:

General description

1 Scope

The data elements described in ISO 11788 are intended for communication between on-farm process computers and management computers. This part of ISO 11788 specifies how an agricultural data element dictionary (ADED) may be used for on-farm data exchange.

The data elements concerning mobile equipment are not dealt with in this part of ISO 11788.

ADED data elements may be used for:

- direct data exchange between process computer and management program;
- data exchange between process computer and interface software of the process computer on the management computer (PC) (alternatively, manufacturer-specific methods may be used for this exchange);
- data exchange between the interface software for the process computer on the PC and the management program.

NOTE — This does not mean that agricultural data elements cannot be used for other data interchange. Many farmers use a method similar to ADIS to exchange data between management computers and external computers. ADED may be used for data interchange to external computers or to exchange data between independent software applications used on a management computer.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 11788. At the time of publication, the edition indicated was valid. All standards are subjected to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 11787:1995, *Machinery for agriculture and forestry — Data interchange between management computer and process computers — Data interchange syntax*.

3 Definitions

For the purposes of this part of ISO 11788, the following definitions apply.

3.1 agricultural data element dictionary (ADED)

description of standardized data elements used for agricultural purposes

3.2 agricultural data interchange syntax (ADIS)

syntax for data exchange between management computer and process computer on a farm