

CHEMICAL FERTILISER REGISTER FOR CHEMICAL FERTILISER MANUFACTURERS AND DEALERS

A description of the input via web service and CSV

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VLAAMSE LAND MAATSCHAPPIJ HISTORY DOCUMENTATION

when	what	where
13.04.2021	Type of registration added	- Chemical Fertiliser p. Fout!
		Bladwijzer niet gedefinieerd.
04.05.2021	- decimals: comma notation required	- Chemical Fertiliser p. Fout!
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07.12.2021	- instructions on how to request an API-key	- Access p. Fout! Bladwijzer
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	API-key and kmr-operator-number	- Headers p. Fout! Bladwijzer
		niet gedefinieerd.

1 CONTEXT

A proper use of fertilisers, and thus also of chemical fertilisers, is essential for the evolution to a better water quality. That is why the sixth Manure Action Plan (MAP 6) focuses on better monitoring of the marketing and use of chemical fertilisers.

Growers must keep a marketing and usage register of chemical fertilisers. Since 1 January 2021, manufacturers and traders of chemical fertilisers must register every delivery (sale) of chemical fertiliser within a specified period after delivery (sale) digitally and directly with the Mestbank.

Do you need to register details? You can do this via the <u>Mestbank Counter</u> or via a web service offered by the Flemish Land Agency. With the web service, you can keep the register up to date completely automatically. In this document we will explain the web service and the uploading of a CSV data file according to the structure made available by FLA.

2 SERVICE

You can register each sale of chemical fertiliser to third parties via the chemical fertiliser register service for chemical fertiliser dealers.

2.1 ACCESS

The service can be reached via https://eloket.vlm.be/mestbank/KunstMestRegisterServices/Verkoop. The test version can be accessed via https://acceptatie-extern.vlm.be/mestbank/KunstMestRegisterServices/Verkoop.

In order to make use of the service, you must apply for an API-key for your personal account¹ at the Manure Bank.

This key is personal and is valid for all services at the Manure Bank counter. You should proceed as follows:

¹ In order to be able to forward data for a specific chemical fertiliser trader to the Manure Bank you must either be the chemical fertiliser trader in question (or an associate) or you must hold a mandate from the chemical fertiliser trader in question. If you want to act as mandatory, you must first <u>be registered as mandatory</u>. When you are registered as mandatory, the chemical fertiliser trader can allocate a mandate to you via the Manure Bank counter. The Flemish Land Agency website offers further <u>explanation of the procedure</u>.



Version 23.12.2020 www.vlm.be

- Surf to the Manure Bank counter and log on.
 - o Production: http://www.mestbankloket.be
 - o Acceptance: https://acceptatie-extern.vlm.be/mestbank/portaal



• Request a new API-key using the button 'Generate new API-key'.



- Please note: the key you receive:
 - o is only valid for the environment in which the key was generated;
 - is strictly personal;
 - will be displayed only once. If you lose the code, you will have to request a new one. You will see the first 10 characters of your current key if you click on the 'lock'. In this way you can, for example, check which key is valid for which environment.



2.2 REQUESTS

The following operations are possible:

- POST (Insert)
- PUT (Amend)
- GET (Retrieve)
- DELETE (Delete)

2.3 HEADERS

The headers contain details about the form of the data and identification details for use of the service. The API key and the operator number (identification number that manufacturers and dealers of chemical fertilisers receive from the Mestbank) indicate who is performing the registration and for which operator. The headers have the same form irrespective of the type of request.

Key	Value	Description
Content-Type	application/json	Description method in which the data must be
		encoded
x-api-key	9b8d231d8f174887	The API key, linked to the user, with which the
	3190g975f807e988	registration is performed
x-api-uitbaternummer KM11100100222		The operator number for which the user wants
		to perform a registration. The user must be
		authorised to register for that chemical fertiliser
		dealer (operator).

2.4 AUTHORISATION RESPONSE

If the header does not contain the correct authentication data, a 401 error code is generated as response: unauthorised. This is a response that can occur for all the request types on the basis of the information in the header.

2.5 POST

```
2.5.1 Body
    "UitbatingNummer": "1100100238",
    "Type": "standaard",
    "MestCode": 1005,
"MestNaam": "Een naam",
    "PercentageN": 20,
    "PercentageP": 10,
    "Eenheid": "KG",
    "Hoeveelheid": 100,
    "HoeveelheidN": 2,
    "HoeveelheidP": 8,
    "Klant": {
         "LandbouwerNummer": "14602136",
        "UitbatingNummer": "MV14602136",
        "KBOLand": "BE",
        "KBONummer": "12345",
         "Naam": "Klant Naam",
         "Adres": {
             "Straat": "Nederstraat",
             "HuisNummer": "2",
             "BusNummer": ""
             "PostCode": "9700",
             "Gemeente": "Oudenaarde",
"LandCode": "BE"
        }
    "Factuur": {
         "Nummer": "F123",
        "Datum": "2019-11-28",
        "Adres": {
             "Straat": "Markt",
             "HuisNummer": "1",
             "BusNummer": "",
             "PostCode": "9700",
```

```
"Gemeente": "Oudenaarde",
    "LandCode": "BE"
}
},
"Levering": {
    "Nummer": "L123",
    "Datum": "2019-11-28",
    "Adres": {
        "Straat": "Markt",
        "HuisNummer": "1",
        "BusNummer": "",
        "PostCode": "9700",
        "Gemeente": "Oudenaarde",
        "LandCode": "BE"
}
},
"ReferentieProducent": "mijn ref"
```

The information to be provided consists of the following parts:

2.5.1.1 Chemical fertiliser dealer

The data below concern the location (operation) from which the sale has taken place. It is mandatory to state the operation and it must belong to the operator for which it is registered.

Field name	Characteristics	Description
Uitbating	Mandatory	The operation where the sale took place. For example, a specific
Nummer	Text	branch. Each operator has at least one operation.
	"KM52787000175 "	Consisting of letters and numerals. Delimiters such as "." Or "-" are not included. Leading zeroes are shown.

2.5.1.2 Chemical Fertiliser

Description of the product sold

Field name	Characteristics	Description
Туре	Optional	The type indicates whether the registration is either
	Text	a standard registration
	"standard",	or a grouped registration of deliveries per fertiliser (maximum) per month
	"export",	outside Flanders (export) or
	"private individual"	• sales to private individuals of <= 100 kg per sale (private individual).
Mestcode	Mandatory Numerical (from list) 353	The fertiliser code that refers to a specific type of fertiliser as defined by the Mestbank. See below for more.
Mestnaam	Optional	The name of the product sold as specified on the invoice.
Wiestindam	Text (free)	The name of the product sold as specified on the invoice.
	"Nitricius Forte"	<u>Mandatory</u> if the fertiliser code = 380 Own composition
PercentageN	Mandatory	Percentage of nitrogen content
	Numerical	Decimal number between 0 and 100 (comma notation).
	12.15	Mandatory for fertiliser code 380
		Sum of percentage N and percentage P may not be greater than 100
PercentageP	Mandatory Numerical	Percentage phosphorus pentoxide (P2O5)
	15.61	Decimal number between 0 and 100 (comma notation). Mandatory for fertiliser code 380
	15.01	Sum of percentage N and percentage P may not be greater than 100
Eenheid	Mandatory	The unit in which the fertiliser is sold
	Text	Options: L (litre), KG (kilogram)
	"KG"	
Hoeveelheid	Mandatory	The amount of sold chemical fertiliser in this sale. A negative quantity can be
	Numerical	booked in the event of return. A negative booking is not intended for making
	1500.55	corrections.
		decimal number (comma notation).
HoeveelheidN	Optional	Total quantity of nitrogen expressed in kg. If this is not included, it will be calculated based on the percentages given and the density of the fertiliser as
	Numerical	assumed based on the accompanying fertiliser code.
	22.50	decimal number (comma notation). Sum of Quantity N and Quantity P may never
		be higher than the total quantity. All quantities must have the same character
HoeveelheidP	Optional	Total quantity of diphosphate pentoxide (P ₂ O ₅) expressed in kg. If this is not
	Numerical	given, it will be calculated based on the percentages given and the density of the
	600.80	fertiliser as assumed based on the accompanying fertiliser code.
		decimal number (comma notation). Sum of Quantity N and Quantity P may never be higher than the total quantity. All quantities must have the same character.

The fertiliser codes, as the types of chemical fertiliser are described at the Mestbank, are:

Code	Name	%N	%P2O5	Density (kg/l)
353	AMMONIUMNITRAAT / KALKAMMONSALPETER	27.00	0.00	1
	Ammonium nitrate / Calcium ammonium nitrate			
354	AMMONIUMSULFAAT / ZWAVELZURE	21.00	0.00	1
	AMMONIAK			
	ammonium sulphate / sulphuric acid ammonia			

357	KALKCYANAMIDE / KALKSTIKSTOF calcium cyanamide / calcium nitrate	19.80	0.00	1
359	UREUM Urea	46.00	0.00	1
360	VLOEIBARE STIKSTOF	30.00	0.00	1.3
	Liquid nitrogen			
380	FERTILISER OWN COMPOSITION	ZERO	ZERO	1
1,005	AMMONIUMSULFAAT UIT ZURE WASSER	ZERO	ZERO	1.1
	Ammonium sulphate from acidic air scrubber			

2.5.1.3 **Customer**

The customer is the other party to whom the chemical fertiliser is sold and is stated on the invoice. The other party must be validly indicated in at least one of the following four ways²: via the grower number, business number, operation number or, if the previous numbers are unavailable, by the name and address details of the customer.

Field name	Characteristics	Description
Landbouw	Optional	The grower number of the customer.
Nummer	Text	Can be shown in display format (with punctuation marks) or without.
Uitbating	Optional	The operation number of the customer, in accordance with the location
Nummer	Text	where the fertiliser is delivered or will be used. The operation number
	"MV387960000 74"	is unique and identifies a branch of a fertiliser manufacturer, fertiliser transporter or other identity, registered with the Mestbank.
		Can be shown in display format (with punctuation marks) or without
KBOLand	Optional	The ISO for the corresponding country. If this is not completed, "BE"
	Text	will be entered by default. May only be entered if the Crossroads Bank
	"BE", "NL"	for Enterprises number is given.
		Consists of 2 letters corresponding with the country as can be found in
		the <u>ISO 3166-1 standard</u>
KBONummer	Optional	The registration number of the company. Registration numbers of
	Text	Belgian companies will be checked for validity.
	"0123456789" or "987654321"	Consists of 9 or 10 numerals (including all leading zeroes)
Naam	Optional	Name of the customer
	Text	If the name of the customer has been given, the address must also be
	"03202708715":	entered.
Adres	Optional	The address of the customer (is developed further below
	Address	If the address of the customer has been given, the name must also be entered.

² In the example in the beginning of this document, all four options are displayed. This is only as illustration.

2.5.1.4 <u>Invoice</u>

Invoice details of the sale

Field name	Characteristics	Description
Nummer	Optional	The number of the sales invoice
	Text	Free textual input. Length of text will be limited to a reasonable
	"VF202000033"	number of characters (32)
Datum	Optional	The date of the sales invoice
	Text	Date in the format yyyy-mm-dd
	"2020-01-08"	
Adres	Optional Address	Invoice address (if different from the customer address) Further explanation of the address details is found below.

2.5.1.5 Delivery

Delivery of the sale

Field name	Characteristics	Description
Nummer	Optional	The number of the delivery note for the sale.
	Text	Free textual input. Length of text will be limited to a reasonable
	"LB202000015"	number of characters (32)
Datum	Mandatory Text "2020-01-10"	The date of delivery. For registration of grouped deliveries per month (see types "export and "private individual"), each date within the month of delivery is a valid delivery date. Only the month in which the delivery took place is important here. Date in the format yyyy-mm-dd
Adres	Optional Address	Delivery address (if different from customer address). Further explanation below.

2.5.1.6 Reference

Field name	Characteristics	Description
Referentie Producent	Optional Text "VF20200003300 08"	A series of characters which the manufacturer himself can allocate to the sales line. Preferably, this number identifies the unique sales line for this manufacturer. This is not mandatory. This field can be used after input to request lines.

2.5.1.7 Address

All addresses contain the following fields. If an address is given, then all the fields below, with the exception of the country code, are mandatory.

Field name	Characteristics	Description
Straat	Mandatory Text <i>"Kerkstraat"</i>	The street name
Huisnummer	Mandatory Text "10":	The house number
Busnummer	Optional Text "00.01":	The box number
Postcode	Mandatory "8020"	The postal code In the event of Country ISO Code BE, the validity of the postal code is checked.
Gemeente	Mandatory "Oostkamp"	The municipality
LandIsoCode	Optional "BE"	The two-letter country code as described in the ISO 3166-1 standard If not stated, "BE" will be assumed as default

2.5.2 Result

2.5.2.1 Error codes

If there is an incorrect registration, you will receive an error code in response. In addition to the 401 code (see above), 400 (Bad Request) is the most important error code. The response body will contain a description of the error message (see below).

```
"type": "https://tools.ietf.org/html/rfc7231#section-6.5.1",
"title": "One or more validation errors occurred.",
"status": 400,
"traceld": "|5f722abe-43adef8035c82c47.",
"errors": {
    "Factuur.Adres.PostCode": ["PostCode moet ingevuld zijn"]
    }
}
```

2.5.2.2 Success

If the registration is successful, you will receive the registration together with a <u>unique code</u> (reference VLM) that uniquely refers to the registered sale. This can be used when amending, requesting or deleting lines. Additional fields are the status of the registration (on time or late), the user who is linked to the API key and the time of registration.

```
{
    "uitbatingNummer": "KM52787000175",
    "mestCode": 1005,
    "mestNaam": "Een naam",
```

```
"percentageN": null,
  "percentageP": null,
  "eenheid": "KG",
  "hoeveelheid": 100,
  "hoeveelheidN": null,
  "hoeveelheidP": null,
  "klant": {
    "landbouwerNummer": null,
    "uitbatingNummer": null,
    "kboLand": null,
    "kboNummer": null,
    "naam": "Gregorio Murray",
    "adres": {
      "straat": "Waelchi Cove",
      "huisNummer": "94",
      "busNummer": null,
      "postCode": "728",
      "gemeente": "South Virgie",
      "landIsoCode": "BE",
      "land": null
    }
  },
  "factuur": {
    "nummer": "F874",
    "datum": "2018-11-23T00:00:00",
    "adres": {
      "straat": "Dalton Falls",
      "huisNummer": "547",
      "busNummer": null,
      "postCode": "687",
      "gemeente": "Casperbury",
      "landIsoCode": "BE",
      "land": null
    }
  },
  "levering": {
    "nummer": "L465",
    "datum": "2018-11-23T00:00:00",
    "adres": {
      "straat": "Graham Wells",
      "huisNummer": "330",
      "busNummer": null,
      "postCode": "920",
      "gemeente": "East Chrishaven",
      "landIsoCode": "BE",
      "land": null
    }
  },
  "referentieVIm": "6bd2c78c-18e9-4efc-ad0f-63d843a8f326",
  "status": "Laattijdig",
  "createdBy": "",
  "createdOn": "0001-01-01T00:00:00",
  "referentieProducent": "ed8cb374-79fb-4da5-aa1c-a28d3b8550e6",
  "errors": []
}
```

2.6 GET

With the GET request:

- a specific registration of a sale can be requested using the unique reference "reference VLM".
- the 10 most recent registrations of a specific operator (as given in the header) can be requested. You can also indicate how many lines must possibly be skipped. For each request, a maximum of 10 lines are given.

Only valid records are returned (with a structured database, you can also upload invalid lines via the Mestbank Counter).

2.6.1 Query string Parameters

Parameter name	Characteristics	Description
Referentie VLM	Optional Text "9206cfdcc79140 2bae9695221074 1298"	A series of characters that uniquely define a registered sale. 32 long, alphanumeric
Skip	Optional Number 8	Number of lines to be skipped Integer

2.6.2 Error codes

The same 400 and 401 status codes are used for requests with a negative response. This is either an error in the parameters or an unauthorised access respectively.

2.6.3 Successful request

If the request is successful, the status 200 will be given. That does not mean that a record has been found. If there are no records that satisfy the selection, a request body will be given where the result is empty. You will find an example below.

Count gives the total number of results that meet the request. When using the unique reference VLM, this is 1. When the most recent registrations are requested, this is - taking into account the number of lines to be skipped - a maximum of 10.

The array results contain a maximum of 10 registrations in json notation as described above.

2.7 PUT

The operation is identical to a POST request with the difference that it completely overwrites an existing registration. The record is overwritten with all the values as given in the body of the request.

The request url has the same form as the GET request.

2.7.1 **URL** path

The first value that follows the URL that defines the service is the value of the unique key that refers to a specific record that must be overwritten.

Field name	Characteristics	Description
Referentie	Mandatory	A series of characters that uniquely define a registered sale.
VLM	Text	32 long, alphanumeric
	'9206cfdcc791402	
	bae96952210741	
	298′	

Example: {{endpoint}}/Verkoop/4765fbf4-e29f-49bd-aef8-d1dca3739379

2.7.2 Error codes

Identical to POST with the difference that additional error messages are possible for a 401 (Bad Request) response code with regard to giving an incorrect reference.

2.7.3 Success code

When the update of a registration is successful, 204 (No content) will be given as response code.

2.8 DELETE

This request deletes a specific registration.

2.8.1 URL path

The first value that follows the URL that defines the service is the value of the unique key that refers to a specific record that must be overwritten.

Field name	Characteristics	Description
Referentie	Mandatory	A series of characters that uniquely define a registered sale.
VLM	Text '9206cfdcc791402 bae96952210741 298'	32 long, alphanumeric

Example: {{endpoint}}/Verkoop/4765fbf4-e29f-49bd-aef8-d1dca3739379

2.8.2 Result

2.8.2.1 Error codes

The expected error codes are 401 if you are denied access to the service and 400 if the sales record could not be deleted. An error message can be found in the body as described above.

2.8.2.2 **Success**

When the deletion of a registration is successful, 204 (No content) will be given as response code.

3 INPUT VIA STRUCTURED DATA BASE (CSV)

3.1 ACCESS

You can upload a CSV file (comma-separated values) with sales lines via the <u>Mestbank Counter</u>. Via the Chemical fertiliser section, you will arrive at the overview of the registered sales of chemical fertilisers, where you find the button 'upload CSV' at top right.

To obtain access to the Mestbank Counter, you must be registered with the Flemish Land Agency as operator (KM) or as proxy holder of an operator. You sign in with your eID and card reader or one of your activated digital keys.

3.2 FUNCTIONALITY

With the CSV you can only upload new lines. Changes to existing lines cannot be performed. During the process of uploading, two errors can occur:

- The CSV file does not comply with the structure to allow data to be uploaded. The process of uploading will be interrupted.
- The content of a number of lines is not correctly entered: the lines with error codes are loaded but considered invalid. You can adjust the errors on the screen.

3.3 STRUCTURE AND CONTENT

Structure

- A CSV file is a text file coded in the UTF8 format.
- Each line in the file is a registration of sale.
- Each line consists of a fixed number of fields. The sequence determines the meaning of the field.
- The fields are separated by commas and the values are preferably enclosed between double quotation marks.
- The first line of the field is considered the header and is not loaded. The names in the header fields are not important and can be determined according to own use. The sequence of the columns determines the meaning of the fields in the lines with data.

The values in the field correspond with the fields as described above for the service in the POST request.

```
Veld 1:
         "UitbatingNummer": "1100100238",
Veld 2:
          "MestCode": 1005,
Veld 3:
         "MestNaam": "Een naam",
Veld 4:
         "PercentageN": 20,
Veld 5:
         "PercentageP": 10,
Veld 6:
         "Eenheid": "KG",
Veld 7:
         "Hoeveelheid": 100,
Veld 8:
         "HoeveelheidN": 2,
Veld 9:
         "HoeveelheidP": 8,
Veld 10:
         "KlantLandbouwerNummer": "14602136",
Veld 11:
         "KlantUitbatingNummer": "MV14602136",
Veld 12:
         "KlantKBOLand": "BE",
Veld 13:
         "KlantKBONummer": "12345",
Veld 14:
         "KlantNaam": "Klant Naam",
Veld 15:
         "KlantAdresStraat": "Nederstraat",
Veld 16:
         "KlantAdresHuisNummer": "2",
```

```
Veld 17:
         "KlantAdresBusNummer": "",
Veld 18:
         "KlantAdresPostCode": "9700",
Veld 19:
         "KlantAdresGemeente": "Oudenaarde",
Veld 20:
         "KlantAdresLandCode": "BE"
Veld 21:
         "Factuur Nummer": "F123",
         "FactuurDatum": "2019-11-28",
Veld 22:
Veld 23:
         "FactuurdresStraat": "Markt",
Veld 24:
         "FactuurAdresHuisNummer": "1",
Veld 25:
         "FactuurAdresBusNummer": "A",
Veld 26:
         "FactuurAdresPostCode": "9700",
Veld 27:
         "FactuurAdresGemeente": "Oudenaarde",
Veld 28:
         "FactuurAdresLandCode": "BE"
Veld 29:
         "LeveringNummer": "L123",
Veld 30:
         "LeveringDatum": "2019-11-28",
Veld 31:
         "LeveringAdresStraat": "Markt",
         "LeveringAdresHuisNummer": "1",
Veld 32:
Veld 33:
         "LeveringAdresBusNummer": "",
Veld 34:
         "LeveringAdresPostCode": "9700",
         "LeveringAdresGemeente": "Oudenaarde",
Veld 35:
Veld 36:
         "LeveringAdresLandCode": "BE"
         "ReferentieProducent": "mijn ref"
Veld 37:
Veld 38:
         "type": "standaard" (indien niet ingevuld/opgegeven is de waarde
   "standaard")
```