AGRONIX

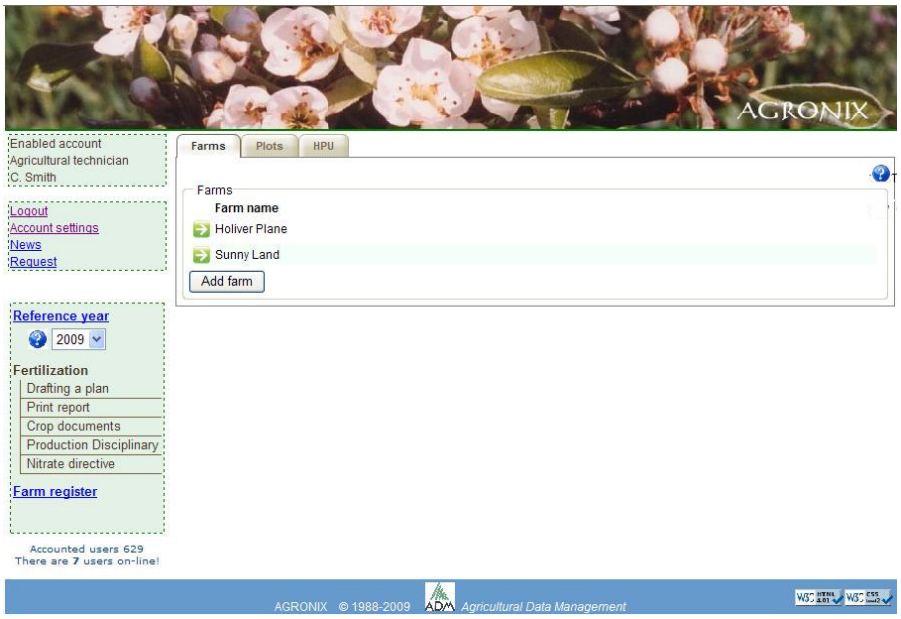
The portal of services, of data elaboration
and
of technical-agronomic documentation

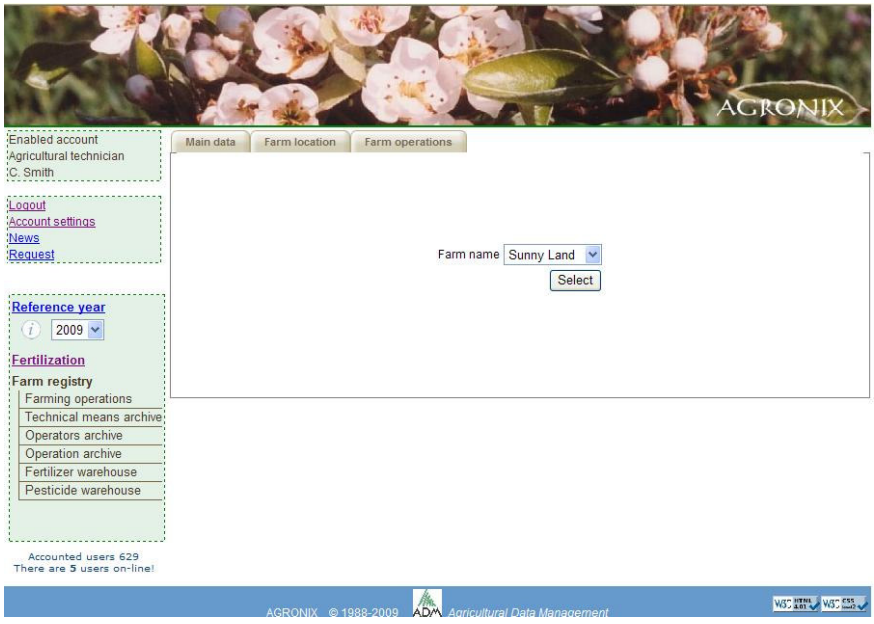
Quick help

The portal AGRONIX quickly become a system of integrated services that will help the farm and technicians to fulfill the formalities imposed by law on the different activities related to production.
In this guide we will give a brief but useful presentation of the services on the portal in order to enable consumers of AGRONIX to be immediately ready to use its functionality..

The topics will be treated in each service as they are made available. The services will be activated will be visible on the green bar on the left.

Each of them may contain a number of references to related topics that will appear only after clicking on the service of interest. The following figures show an example with two active services: Fertilization and Farm Register and related topics .





Notes on some anomalies

During the use of services, it may happen that we cannot go forward. The reason is that in some cases the buttons needed to perform certain actions do not display as add a farm or add a plot, etc ....
The reason is to be charged to the browser you are using. In particular, this is a problem with some older versions of Internet Explorer prior to version 7. In this case we suggest upgrading to version 7 or 8, or you can use other browsers such as Mozilla Firefox or the new Google Chrome. If the error persists we recommend to use the link Request to explain what the problem is, you will receive a prompt response from our technical support.

Another appearance of failure could be where the user, for a bit 'of time, working on the portal AGRONIX and then stay idle for more than half an hour without having logged out (closed session). Any movement and action is made on the open page, does not produce any change other than to remain on hold. The reason is because the page is already inactive and then it is necessary to log in again into the portal, i.e. you must re-authenticate (enter your email and password).

To avoid unnecessary loss of data, it is recommended to save data via the 

button on every page before you leave the activity on the portal. In all cases, log out is a recommended operation in order to leave the system not engaged in quiescent working sessions, but which reduce the amount of memory to the other users online.

FERTILIZATION Service

"Fertilization" is the service for the preparation of plans for fertilizing agricultural crops. To proceed with the drafting of the plan, the system requires some important information, some of which are mandatory in order to proceed with the calculation.

The data to be inserted are divided into pages organized by topic: farm data, data plots and data for each of these UPO data (UPO=Units of Homogeneous Production). Each UPO will be able to process the fertilization plan.

The steps required to process the fertilization plan are therefore:

- Include references to the Farn (farm data) which will be later linked the data of the plots and UPOS.
- Selected the farm, you can enter data for plots belonging to the farm land. The **Plot** is a portion of the farm land that has homogeneous pedo-climatic characteristics. Each plot is ideally divided into portions homogeneous for crop, rootstock, variety, soil characteristics and cultivation technique called UPO.
- Selected the plot, you can enter data of relative UPOs. At each UPO have been joined a number of information concerning the crop of which you want to program fertilization, the soil on which it is grown (i.e. the knowledge of the amount of nutrients in the soil through chemical and physical analysis or estimation of the most important parameters needed to the calculations) and the technique adopted for cultivation (pruning shade, planting density, etc ...)

- For each UPO you can elaborate the fertilization plan after entering the data analysis or the estimation of some soil parameters and the data of trend in production and quality of the previous year.

The outcome of the elaboration will provide in pdf format (for free access) or odt format (for buyed access) the file containing the summary of important data input (farm, plot and UPO reference) and detailed plan of inputs of nutrients to be split into some phases and accompanied by recommendations for distribution.

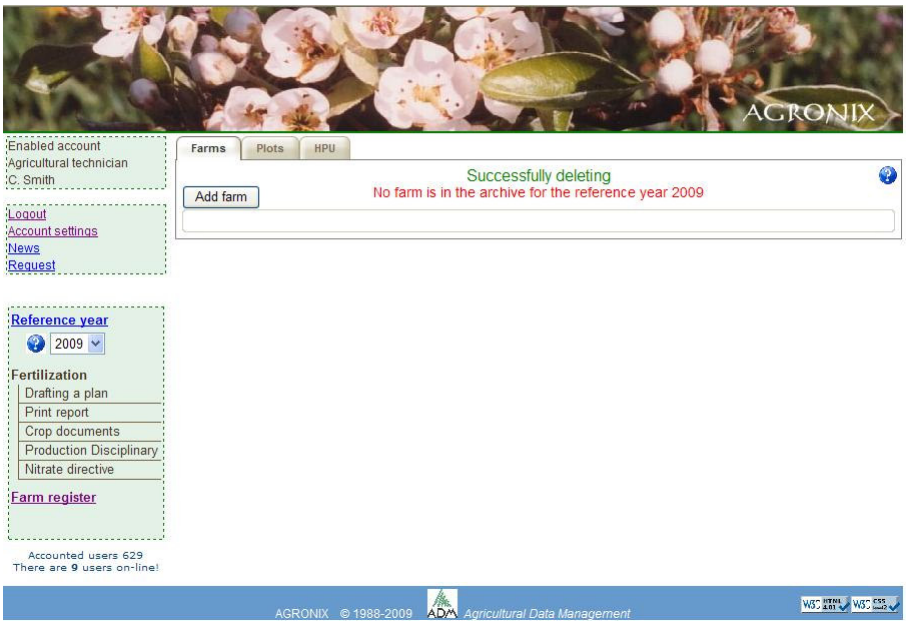
How to access each type of information

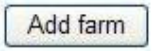
To the right of the bar service, the space for data input will be divided into several sheets or pages with labels at the top. Each sheet contains data grouped by subject: farm data, plot data, UPO data, etc. To access to each page, you can click on the appropriate label and it becomes active only if the data of the previous sheet have been included. For example if you initially want to click on the label Plots but farm data are not charged, the sheet Plots will not become active.

How to create the sheet of a farm

The system provides management for multi-mono version of farm data. The free access to the serviceoffers the single-farm solution that works exactly like the multi-farm with the only difference that you can handle plots and UPO of a unique farm.

If this is the first time you are entering the farm data, you should click on the sheet labeled Farm and the following screen appear:

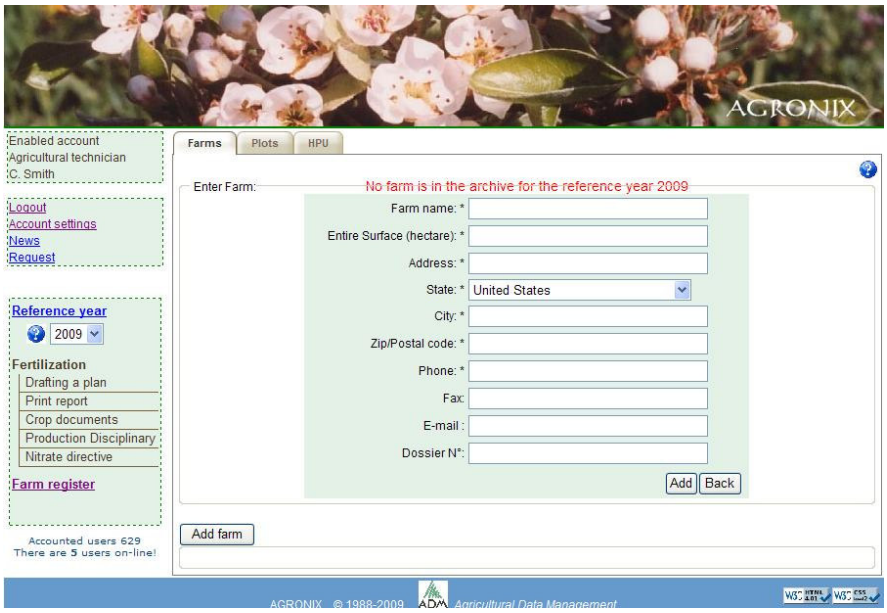


with a warning: "No farm is in the archive for the reference year. ..." to remember that you must enter your farm info using the button 

.
If this button is not visible you must refer to the section "Notes on some anomalies" at the beginning of this document. The system displays the current one as the base year, as the

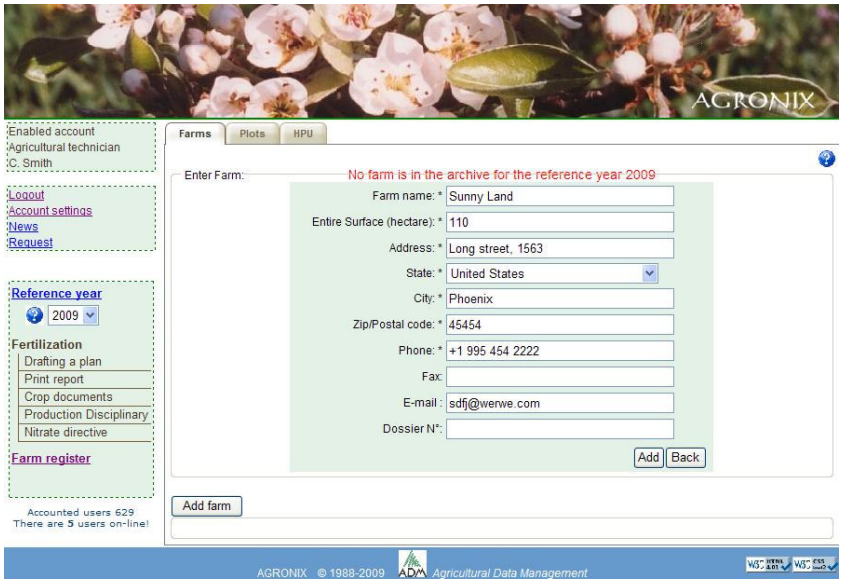
system will be used over the years you can select your farm's data entered in previous years, with its linked reports.

Clicking on the button Add farm will display the sheet for the inclusion of farm data. The fields marked with * are mandatory data



After filling the fields use the button Add farm to insert the data permanently on archive oppure Back or back to not enter if you think you have made an error during typing process.

After entering the farm's data, the page changes the buttons below the sheet as shown in the picture at left.

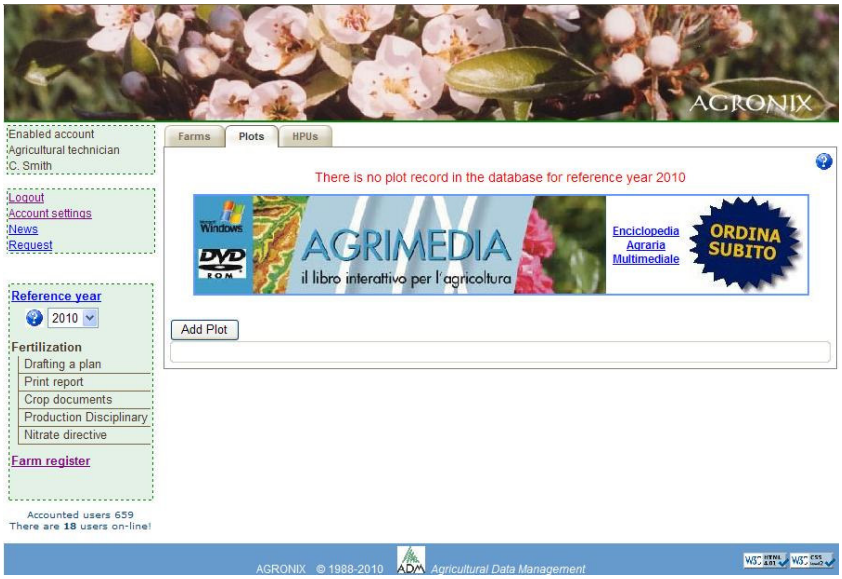


You can still make further changes on the sheet and in order to make them permanent in the database you will type the button Save. If you want to delete the entire sheet, you will type the button Delete

For Show plots button, see next section.

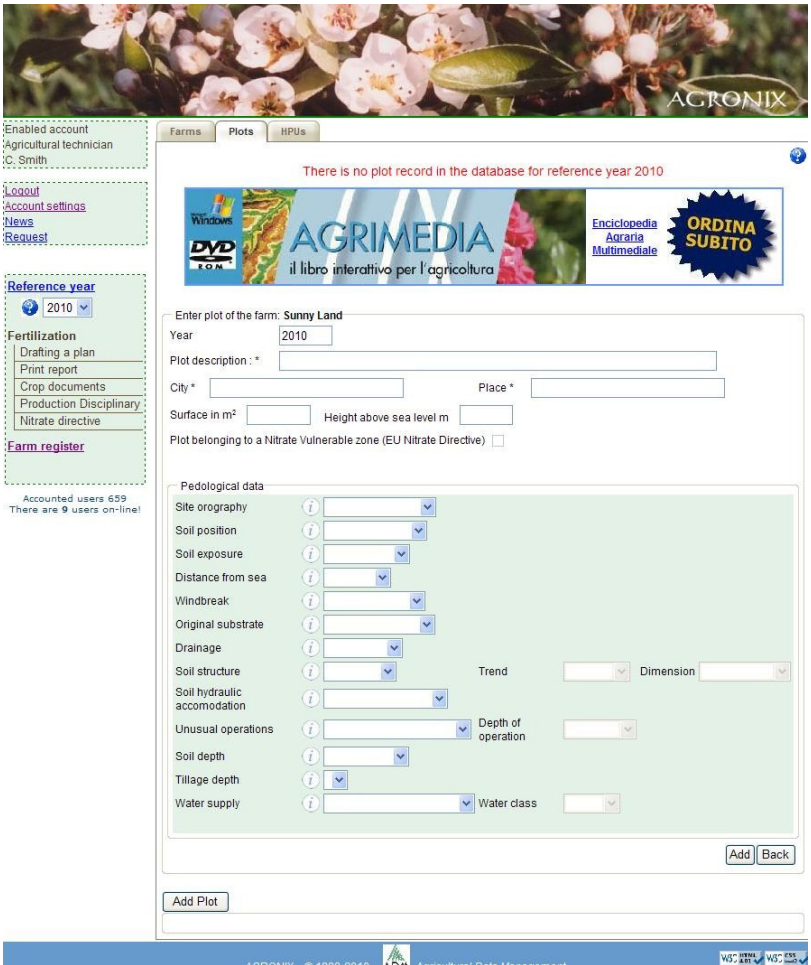
How to enter information for a plot.

To enter information for a plot click the button Show plots under farm data (previous snapshot) or on the label Plots at the top of the datasheet Farms Plots HPUs. The



effect will be to make a page listing the plots already inserted, or will indicate via a special message that were not included plots for the reference year indicated on the left on the Services bar as showed by the example below (message under red labels).

To add a plot click on Add Plot button and you will see the page below.



The field "year" shows the reference year in which the plot was created. The fields "Plot description", City, and Place are mandatory data (marked with *) because they help the system to select, among the available documentation, information related to the territory in which provisions relating to regional Nitrates Directive were enacted.

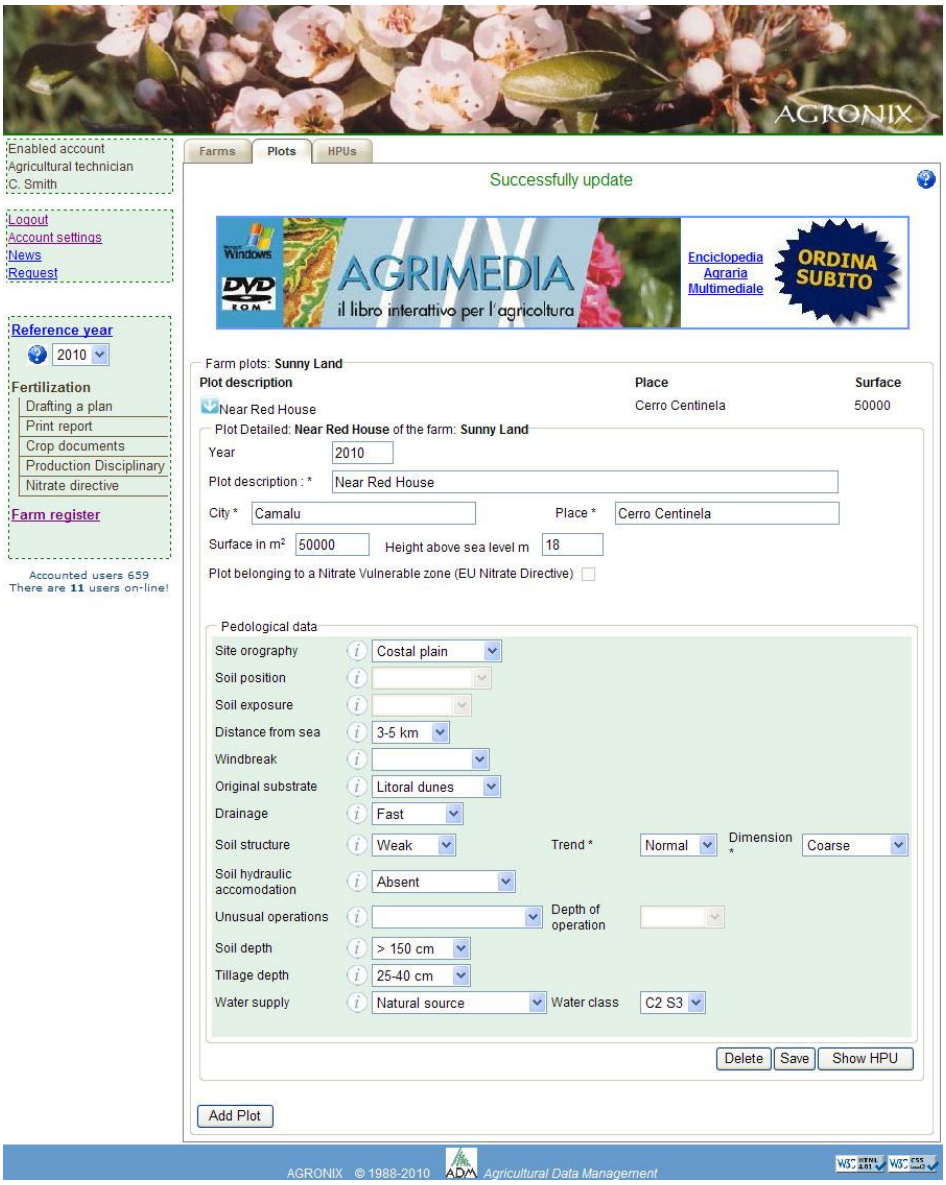
Analyzing these documents, viewable by clicking on the button, the user can determine whether the particular plot belongs to a Nitrate Vulnerable Zone (in short ZVN.)

To say that the plot belongs to a ZVN (clicking on the box) will have the effect that limitations about quantities of

nutrients regulated by local provisions appear in the fertilization report in opposite to data elaborated from the system for the crop that will be select during adding phase of HPU data.

The fields not marked with * are not mandatory, but if inserted enable the system to take into account their specific influences during the calculation.

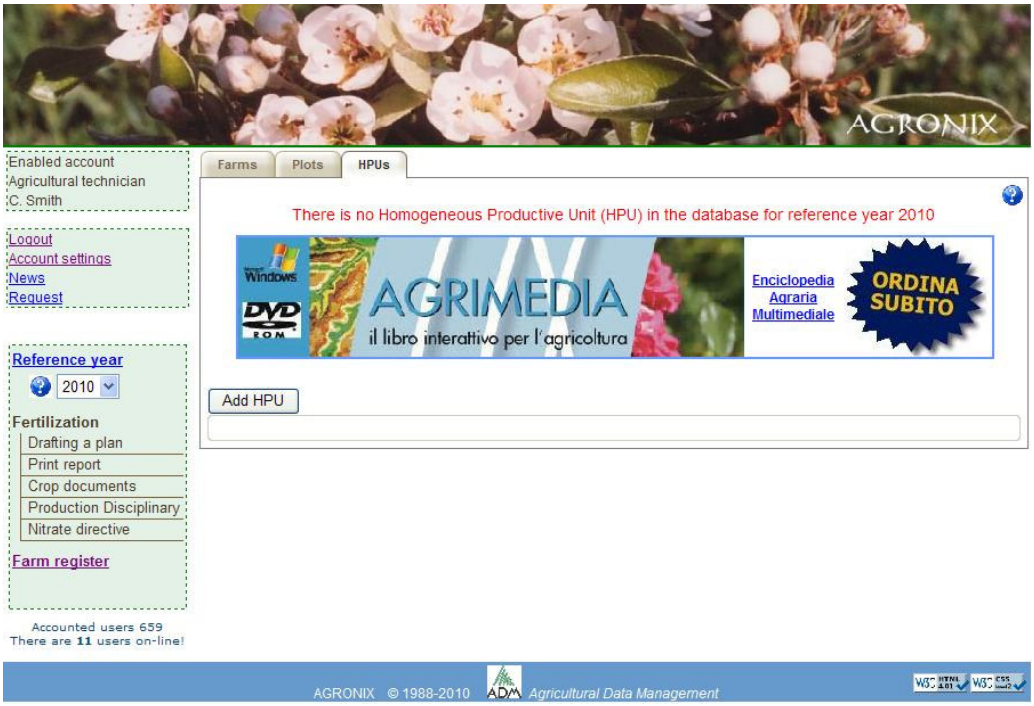
Use the Add button to permanently store the data or the Back button to return without making any changes. After entering the plot data, the page changes the buttons at bottom, as shown:



It will be possible to make further changes, but to make them permanent in the database will need to use the button Save. If you want to delete all data, use the button Delete.

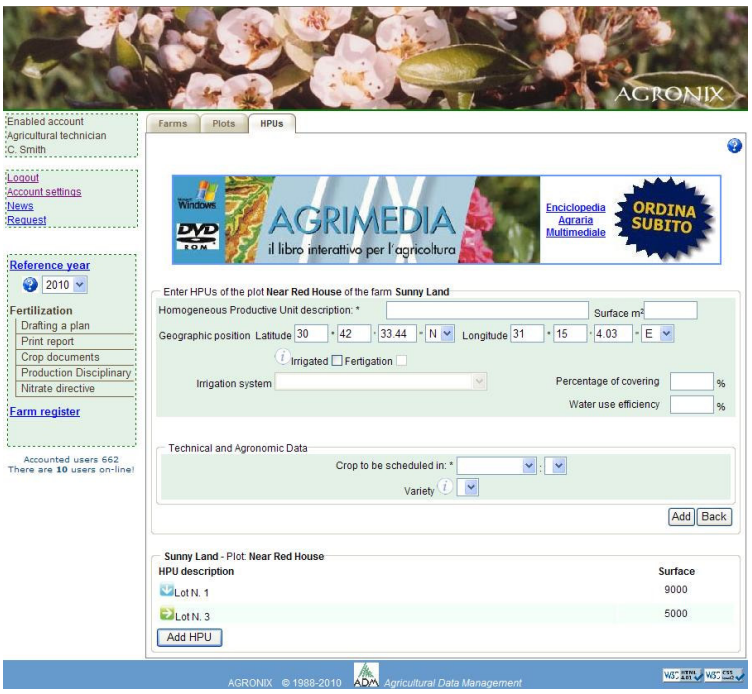
How to enter information for a Homogeneous Productive Unit (HPU)

To enter information for a HPU click the button Show HPU under plot data (previous snapshot) or on the label HPUs at the top of the datasheet Farms Plots HPUs. The effect will be to make a page listing the HPUs already inserted, or will indicate via a special message that were not included HPUs for the reference year indicated on the left on the Services bar as showed by the example below (message under red labels).



To add an HPU click on Add HPU button and you will see the page for entering data.
Note that the fields indicating the geographic position was already filled by the system: this happens whenever the system is able to identify the city and the place of the plot where the HPU is located.
The data are not precise in the sense that the system is close to those locations (eg a district) if known or otherwise approximates them to those of the indicated city. In lack of a real acquaintance of the geographic position of the plot, the system succeeds however to characterize a territory which the HPU belongs. It is task of the customer to insert the real coordinates (if it knows them) in way from being able to characterize the relative climatic area .
If the user does not know them, he can use (as an example) Google Earth free downloadable at http://earth.google.it/index.html where he will be able to search its farm on the territory and to obtain its local coordinates.

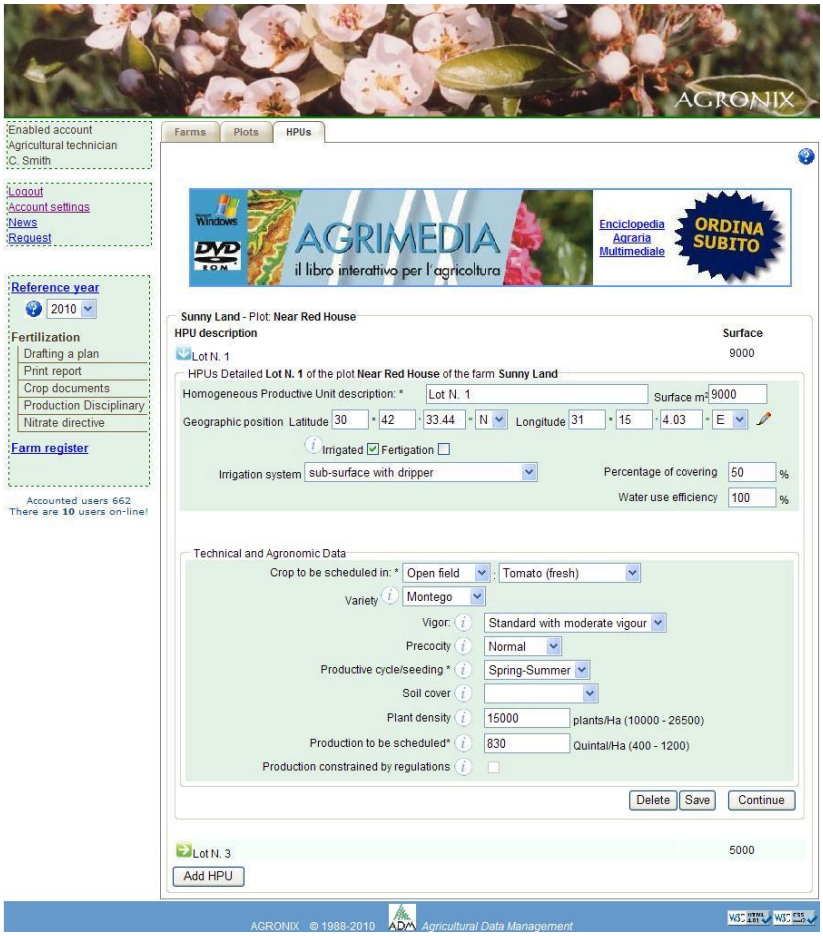
The fields marked with * are mandatory.



It is recommended to supply esplicative descriptions for the HPU in order to easily characterize the area that it represents within the plot.

When you insert the crop to be programmed, the page will expand to request specific data on crops and cultivation technique adopted and submit different requests depending on whether the crop will be grown in a protected environment or in open fields, if herbaceous or arboreal.

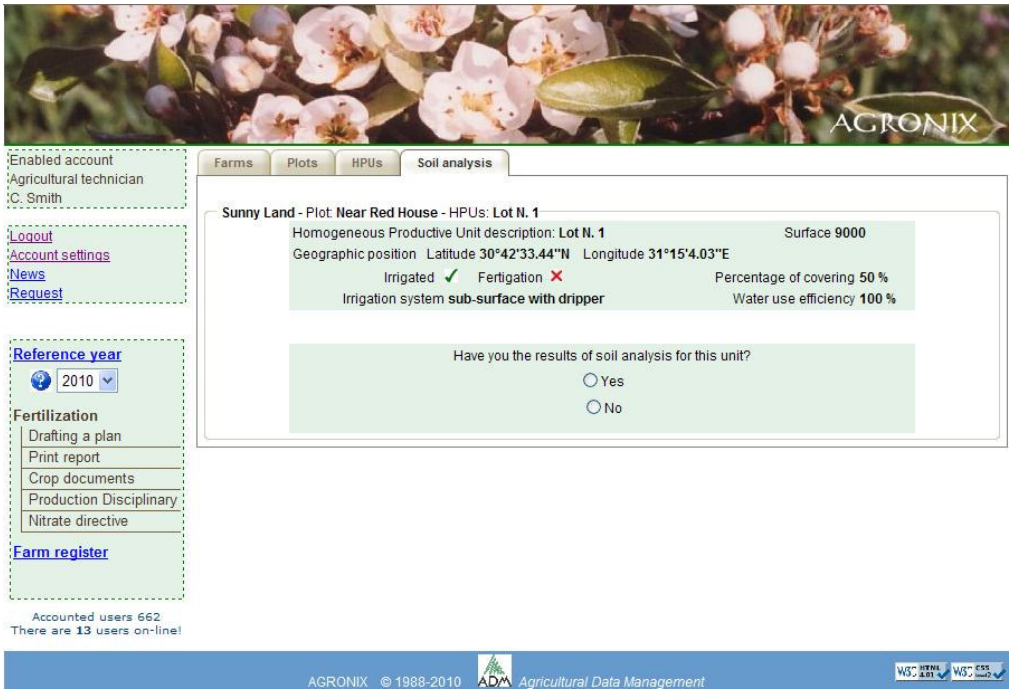
Use the Add button to permanently store the data or the Back button to return without making any changes.



The opposite page is an example of HPU already inserted with technical and agronomic data for tomatoe in open field. The data required relate well to the cultivation and production systems (open field or greenhouse), to the stage of development and to the planned production necessary for calculation of nutrients to supply. Other information even if not mandatory, they have considerable influence in the process of calculation.

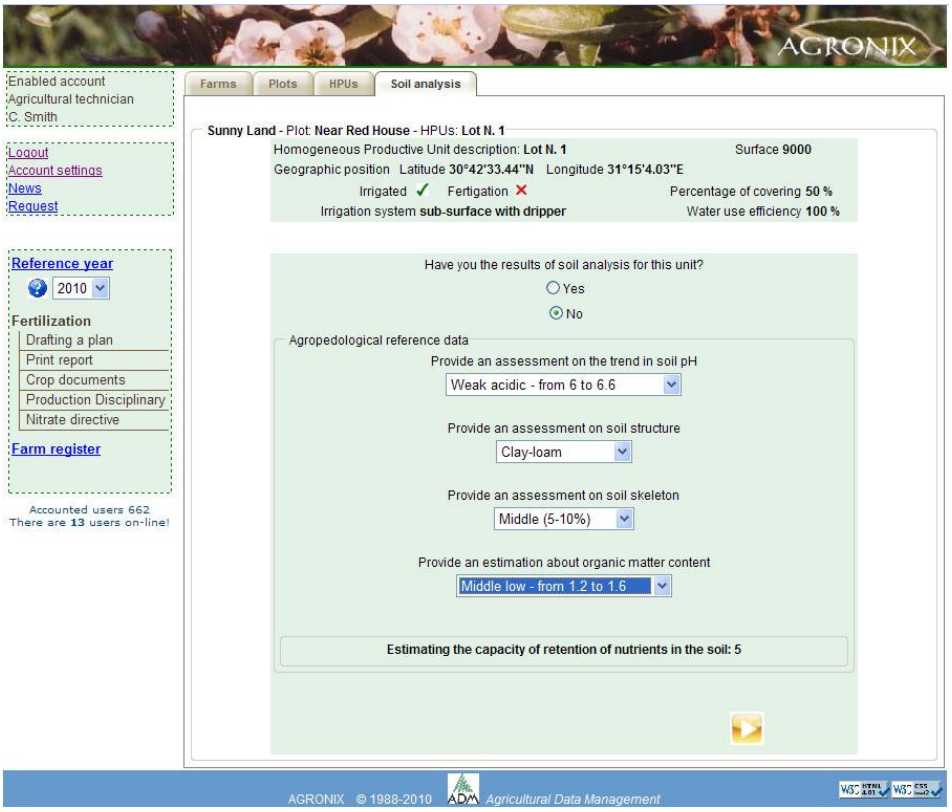
After the insertion can still change the information and make them permanent in the database using the Save button. If you want to delete all data of HPU use the Delete button.

The Continue button allow you to enter information on the characteristics of the soil by inserting the data of the chemical-physical analysis or, in its absence, the estimation of soil characteristics that most influence the calculation of fertilizer units.. It will then add a new sheet with a new label "Soil Analysis".



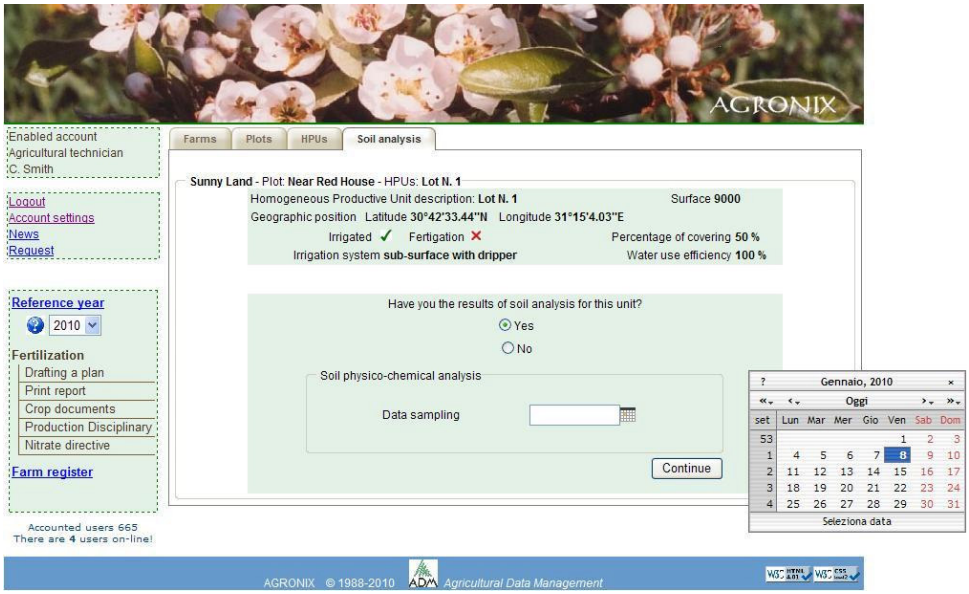
Since soil analysis are not annually carried out, you can provide an estimate of the values of some parameters. To determine what data to enter the system will propose the page above.

Answering no, the system proposes the opposite page that requires an evaluation of some agropedological parameters relevant to the calculation and supplying, according to them, an estimate of the holding capacity of soil nutrients (on the technical meaning refer to the Full Guide).

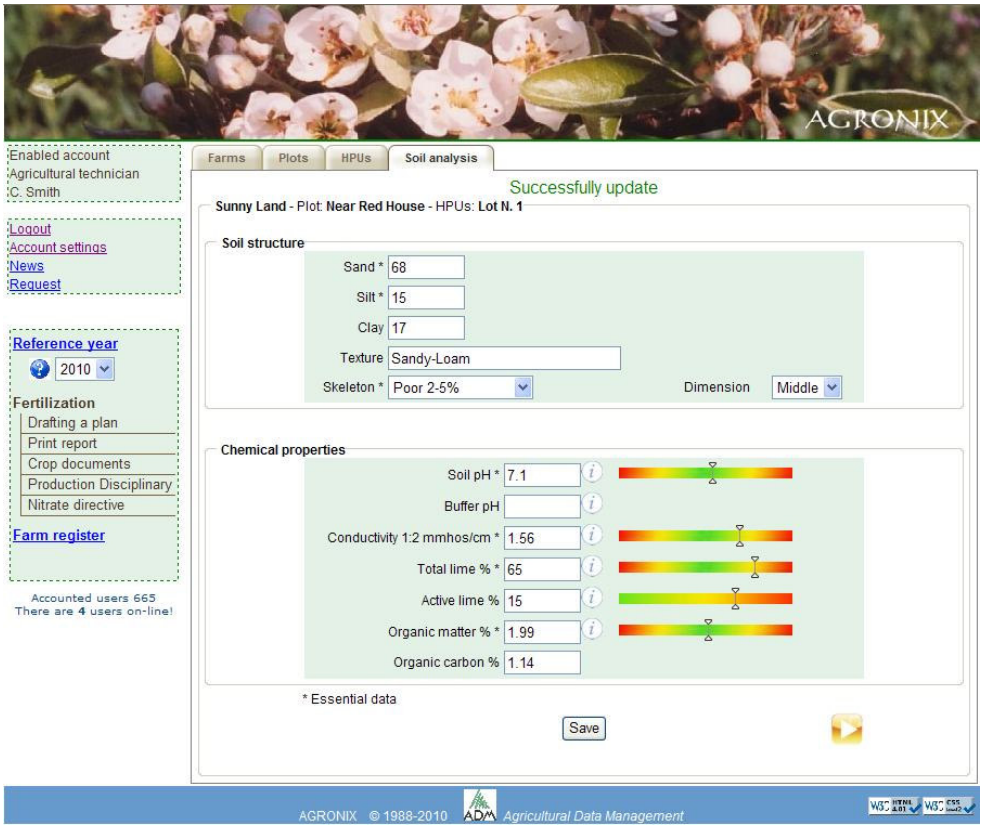


How to enter soil analysis data

Answering yes to question of last figure, the system will lead you to data entry of soil analysis starting from the date of soil sampling.



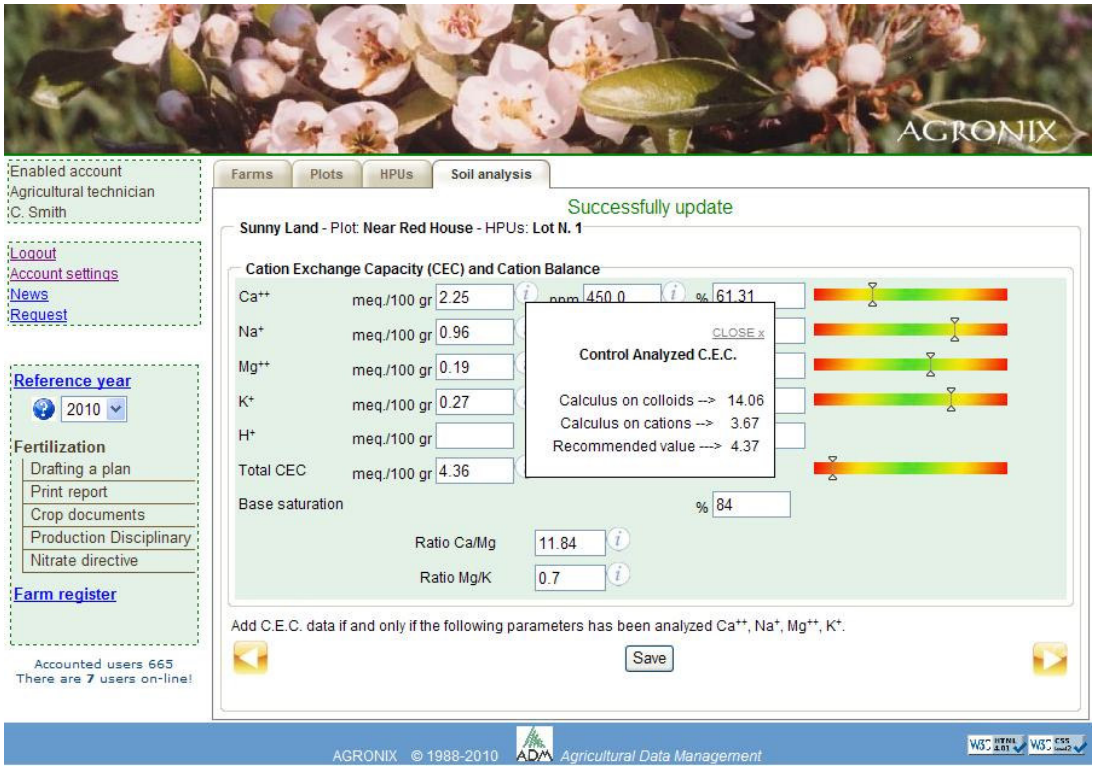
The Continue button will lead to the page for entering data on physico-mechanical and chemical characteristics of the soil.



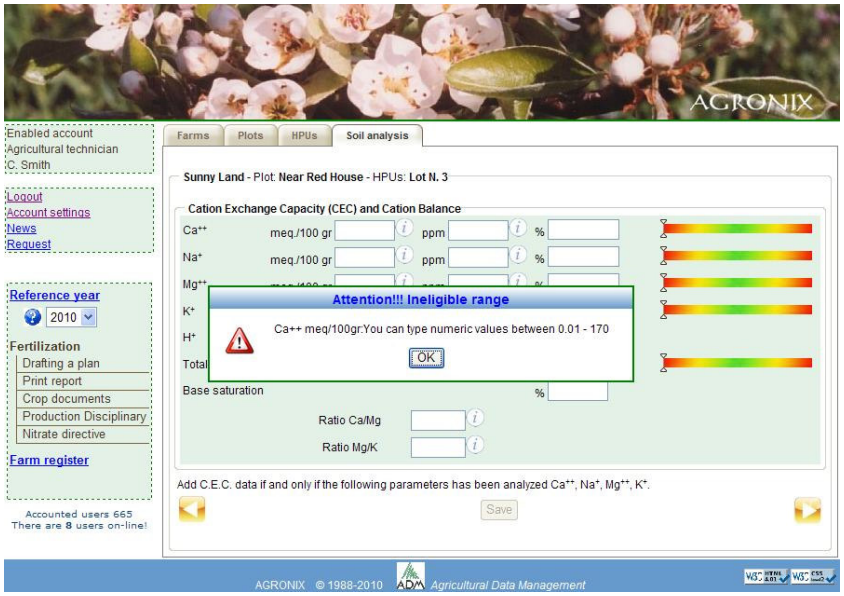
The fields marked with * are mandatory because without them the system is unable to make the proper assessments for the calculation.
The graphic bars located on the right provide a visual assessment of the value of the parameter, meaning red on the left as lower value, green as optimal and red on the right as highest value . Degradation of colour from red to green and vice versa indicates intermediate evaluations of the parameter. The only exception is the active limestone in which the value of optimality is related to low values of the parameter to become negative evaluation (degradation to red) as parameter values become higher.

To permanently store the data in the database use the Save button, a message will ask for confirmation of data entry. After answering yes or no to the confirmation message, move to the next page use the button. You can change data at any time, even after making the save, the important thing is to remember to always click the Save button, before proceeding, to make permanent the data just changed.

The next page covers data of cation exchange capacity. Sometimes the soil testing do not report data from the cation exchange capacity because maybe you were not required (though very useful) so you can bypass the page using the button. If at least the parameters Ca^{++}, Na^{+}, Mg^{++}, K^{+}, were analyzed then you can fill the page because the system itself provides assessments on the missing information. For example it provides two different calculations for the value of CSC (calculation based on the cations and on colloids suggesting then the average value), will you decide what kind of value to choose if the value of CSC has not been analyzed by the laboratory (see next figure).



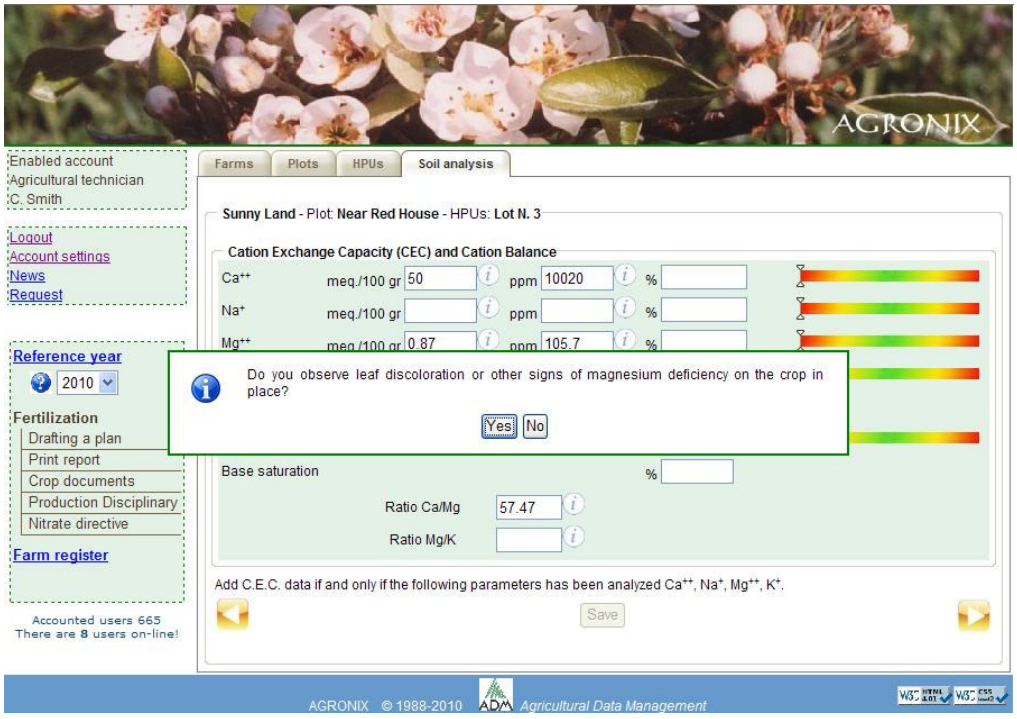
Some fields are inactive because have no make sense in some contexts (for example the value of hydrogen makes sense only for pH values below 6.6) o because are the result of calculus. Also the system provide conversion from meq/100 gr values to ppm and vice versa.



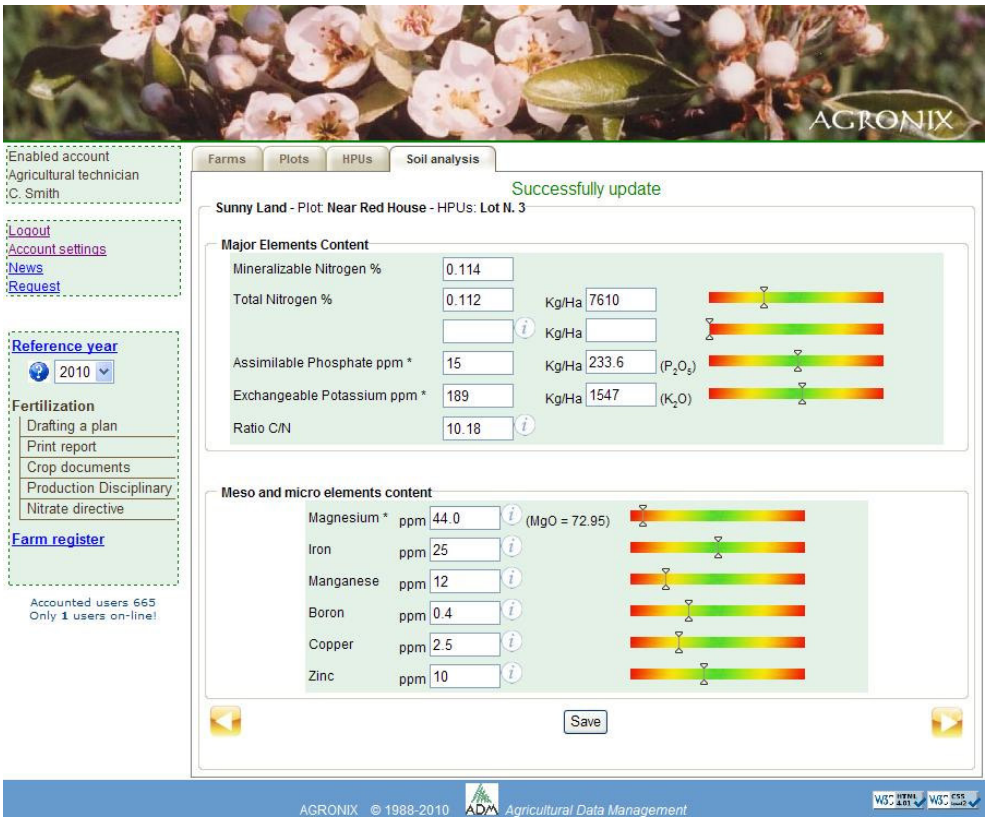
If a not acceptable value is typed the system proposes, for the typed parameter, the range of permissible values as it is shown in the picture (typing the button).
The same message can appear also when the number of decimal digits is greater than what the system expects. In fact the values indicated in the message show also the number of decimal digit that you can use (in the picture Ca^{++} in meq/100 g unit need of 2 decimal digit).

On the page of the exchange capacity, the system performs checks because particular situations can be taken place by issuing messages that help you to determine if the problem is intrinsic to the soil or there was an error while entering values.

The question in the next page is asked because the Ca / Mg ratio is high: it is really so, or the user typed values of Ca^{++} and / or Mg^{++} incorrectly?



Until you don't type all mandatory data, the Save button remains disabled. It is recommended to click on this button in order to store the data before moving on the other pages (the previous with the button, the next with the button) otherwise the data will go lost. The successive page is relative to the insertion of values for macro and the microelements.



The fields marked with * are mandatory; some field are the result of calculation.

How to enter productive and qualitative information about last crop cycle

To complete the picture of information for the calculation phase, the system offers the possibility to include news about the production trend of last year and data of foliar analysis when the crop is of arboreal type. The data are not mandatory, but knowledge of the behaviour of growing phase, production and quality offers ways to make reflections on possible anomalous behaviour of last cycle and provides the starting point for making corrections during current processing phase.

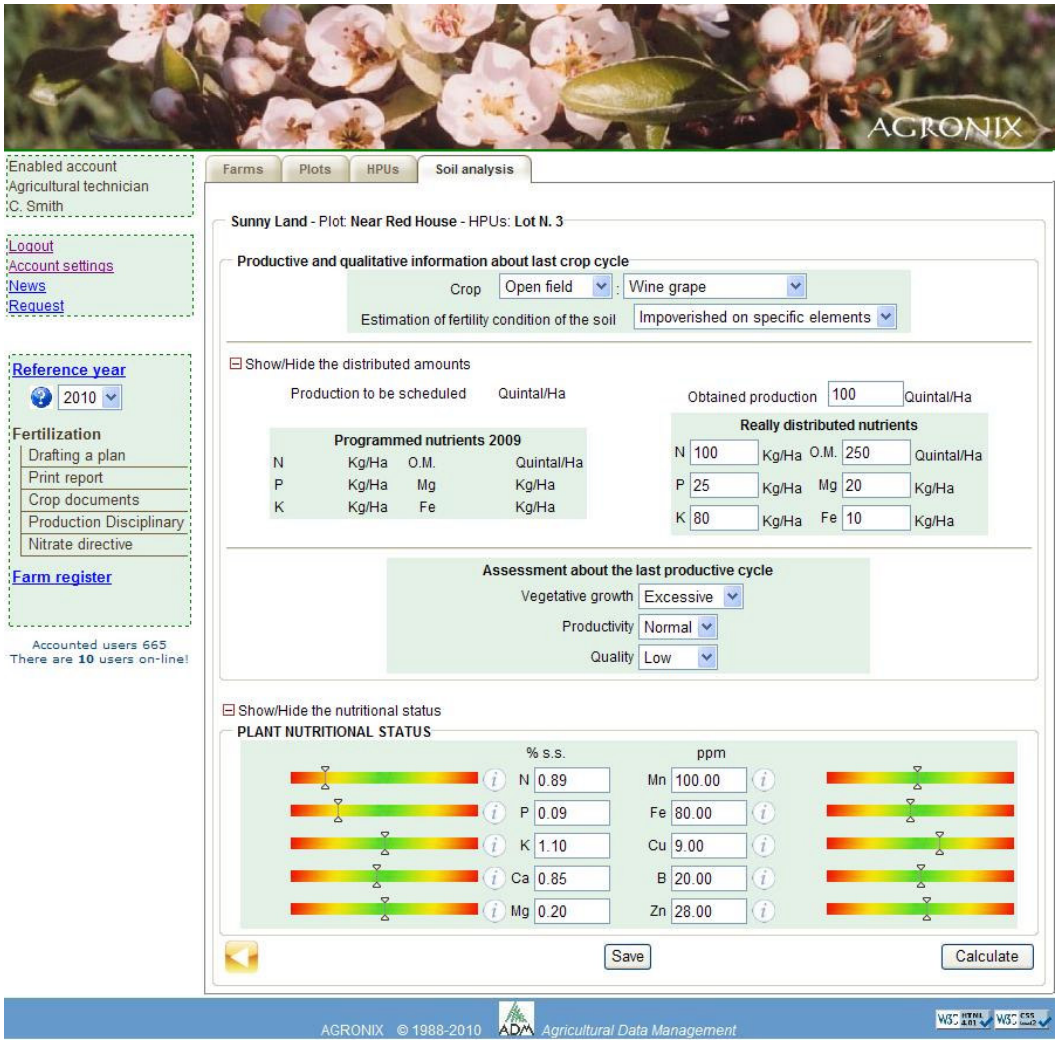
The page is divided into several sections:

- In the first section it is required the crop programmed last year in the same HPU
- The second section displays on the left side nutrient inputs recommended according to the production that had been planned (if the system had calculated the fertilization plan last year), on the right hand allows you to enter the quantities effectively given and the production

achieved (for several reasons the farm could not have supplied the recommended quantities of nutrients).

- The third section allows the user to provide an assessment on the vegetative, productive and qualitative behaviour related to sensory perception of one who has followed the production and can assess the state of vegetative growth of the crop in question and can identify whether the results were those expected.

- The fourth section, only for arboreal, is the effective nutritional status of the crop, measured by foliar analysis that provides a clear picture of health status of the plants last year.



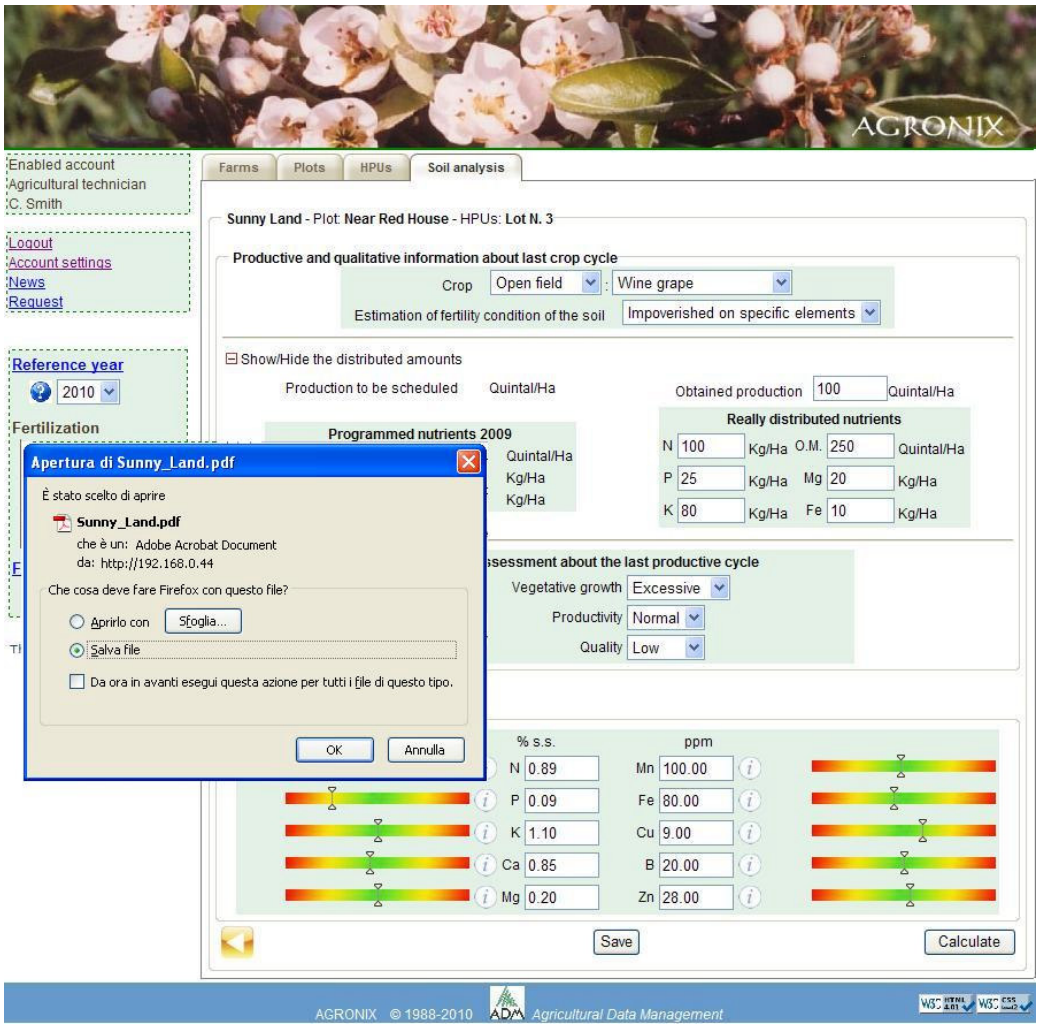
This information, if included, must be permanently stored through the Save button. It is possible return to previous pages using the button or proceed with the calculation of plan fertilization through the Calculate button.

How to process and display the fertilization plan

The time of the calculation follows the phase of insertion of the most important data that the system shows as mandatory. You cannot develop a plan if the system don't know at least a farm, a plot and within it an HPU with data on crop to be schedule and on the characteristics of the soil on which it is cultivated.

The Calculate button become enabled after you have inserted the soil analysis or have supplied the estimation on the skeleton, ph, texture and organic matter of the soil in substitution of the analysis.

After clicking the Calculate button after a few seconds you will be asked to open a file in pdf format (for user with free access) that will contain the summary of entered data and a table of the quantities of nutrients to be made with the subdivision in times and methods for distribution.

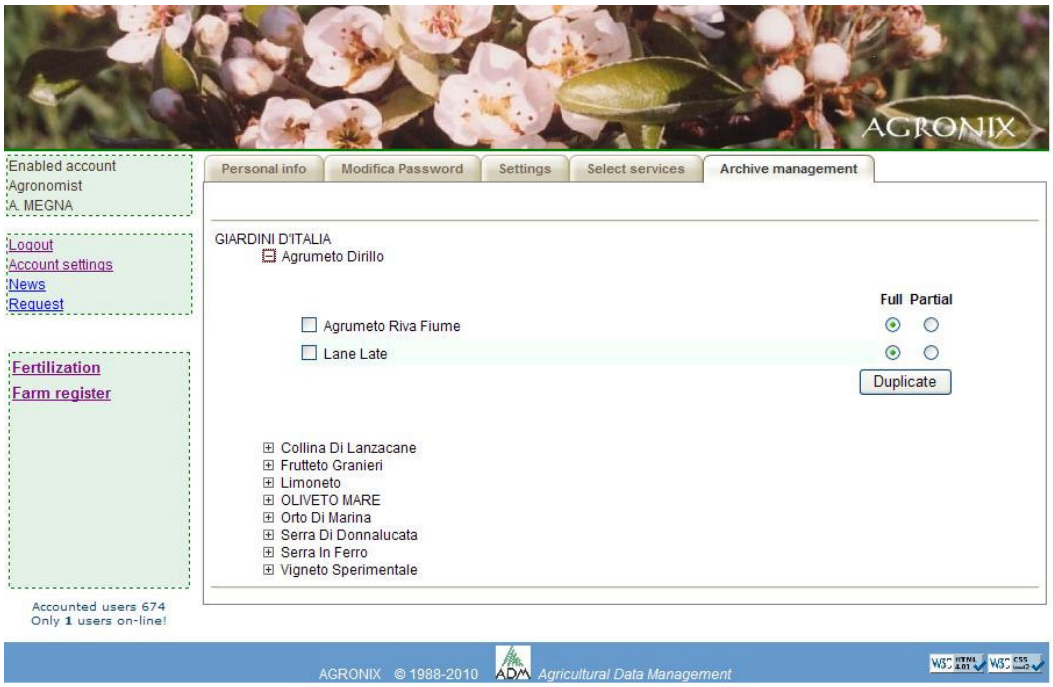


Change of reference year

Like all management software, the planning of fertilization takes into account the reference year. Therefore the change from year to year will cause the automatic copy of the information only for farms and not for plots and HPU.

First of all, to begin programming in the new year, select the new year which will automatically appear in the box of the reference year. Until a plot is created or duplicated, the reference year will remain the old one.

The system provides the ability to copy data from plots and HPU of last year. It was provided, in fact, in the "Account Settings" a section named "Manage Archive" dedicated to the duplication of information. This leaflet will be available until all the land belonging to the selected will not be duplicated. As we proceed to the duplication of the plots and UPO, they disappear from the list of "Archive management".



For each farm descriptions of the parcels and their HPU will display. The duplication may be partial or complete. The partial copy will proceed to a copy of the plot (with all its data) and of the HPU with only the description, geographical coordinates and information on irrigated land but not the crop, to allow the insertion of a new one with its own data. This procedure is useful when you cultivate annual crops. Duplication complete copies both the plot and HPU data without the data of the laboratory: This procedure is useful in the case of multiannual crops or trees for which must be changed only limited information. However the copied data regard only the production phase and last year programmed production that probably should be changed to reflect the new terms of programming of current year.

Obviously if any of the information has changed in both plots that HPU, should go and change it because the system takes it into account for the current year. The revised data for the plot or the HPU in the reference year does not alter the same data in previous years.