

LabCollector



User Guide For Plants Manager Add-on

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1- INTRODUCTION

Thank you for choosing one of AgileBio's solutions for the management of your lab. The **Plants Manager add-on** is a web-based solution allowing efficient management of your seeds and plants. This add-on is associated to storage management and barcode support systems.

The **Plants Manager** provided by AgileBio is suitable for research projects and company projects.

Plants Manager add-on is fully integrated with **LabCollector**, the LIMS we developed for life science research labs, Pharma and biotech industries.

LabCollector is a copyrighted product from AgileBio.

2- GETTING STARTED

You can get **Plants Manager add-on** simply by downloading from www.labcollector.com. LabCollector has to be installed first as it contains the framework. LabCollector support documents for installation are available on our website. **Plants Manager add-on** can be installed on any operating system (Windows, MacOS X, Linux).

1-Manual mode:

Unzip and paste **Plants Manager add-on** folder in the extra modules folder. For Windows it would look like:

```
C:\Programs\AgileBio\LabCollector\www\lab\extra_modules\plantsmanager
```

2-Automatic mode from LabCollector interface:

You can also use LabCollector Menu “Admin > Setup > Upload/Add Addons > Upload Addon ZIP > Add Addon”

Open or return to LabCollector, the **Plants Manager add-on** module is now activated. Click on the module to finish the installation.

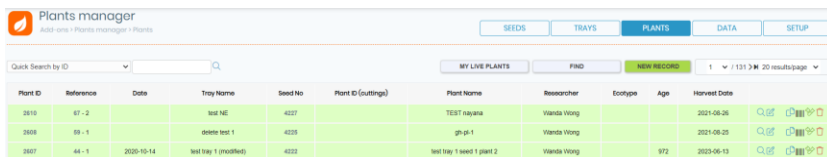
The add-on will remain in a 30 days free trial mode until you save the final license “Setup License”. To obtain a valid license, you have to copy and send the activation key to AgileBio.

3- OVERVIEW

Plants Manager main interface is composed of (see next picture):

- A menu bar with 5 tabs:
 - Trays.
 - Plants.
 - Seeds.
 - Import.
 - Setup.
- A search menu by ID, barcode, plant name or tray name.

By default, users are on the Plants menu.

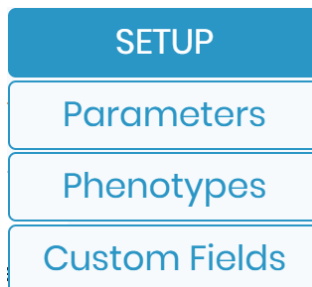


The screenshot shows the Plants Manager interface. At the top, there is a navigation bar with tabs for SEEDS, TRAYS, PLANTS (selected), DATA, and SETUP. Below the navigation bar is a search bar labeled 'Quick Search by ID' and a 'NEW RECORDS' button. The main content area displays a table with the following columns: Plant ID, Reference, Date, Tray Name, Seed No, Plant ID (outlings), Plant Name, Researcher, Ecotype, Age, and Harvest Date. The table contains three rows of data.

Plant ID	Reference	Date	Tray Name	Seed No	Plant ID (outlings)	Plant Name	Researcher	Ecotype	Age	Harvest Date
2810	67 - 2		test NE	4227		TEST rajana	Wanda Wong			2021-08-26
2808	69 - 1		delete test 1	4225		gh-ph-1	Wanda Wong			2021-08-25
2807	44 - 1	2020-10-14	test tray 1 (modified)	4223		test tray 1 seed 1 plant 2	Wanda Wong		972	2023-06-13

3-1. Setup menu

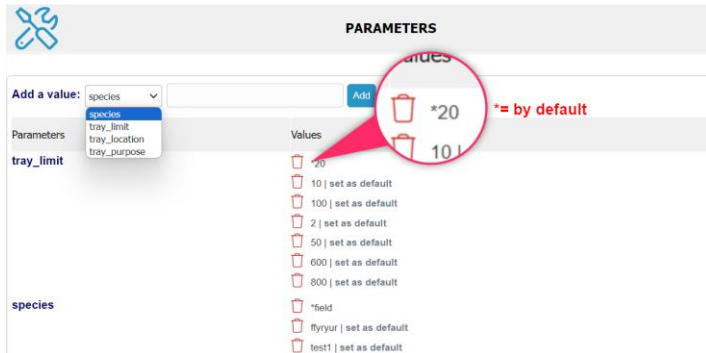
Only users with an administrator profile can access to the Setup menu.



From this menu, parameters, phenotypes and custom fields can be configured.

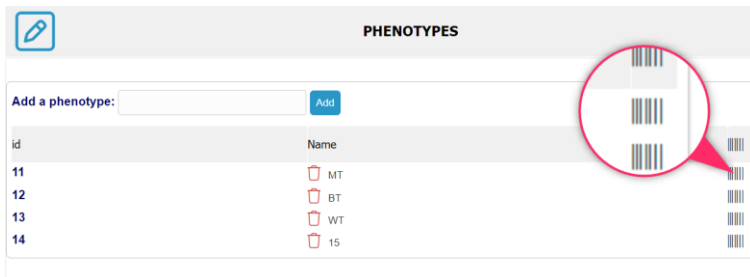
3-1-1. Parameters

From this section, users can add species, tray limit, tray location and tray purpose parameters. To define default settings, click on “set as default” near the chosen values.



3-1-2. Phenotypes

From this section, users can configure plants phenotypes. Each phenotype has its own barcode.



3-1-3. Custom fields

To customize their plants, seeds and trays records, users can create custom fields.

1. Select plants, seeds or trays level.
2. Add a new field by indicating its name.
3. Choose custom field length: 50, 100, 250 or more characters.

4. Indicate if the field is searchable or not.
5. Click on **Save New** button.

CUSTOM FIELDS

Add, Edit or Delete. Use these options to add or remove additional custom fields on the modules.

Tables:

- Plants
- Seeds
- Trays

Custom table fields: **pm_plant**

	Field Name	Field Type	Cat	Field Options	Actions	
1	origin	field (50)		use in searches: Yes		7002
2	color	field (50)		use in searches: Yes		7003
3	characteristics	field (50)		use in searches: Yes		7004
4	test123	field (250)		use in searches: Yes		7005

Click to update display order →

Add New Custom Field

Field Name

Field Type

Free text field
Length: 50

Searchable: Yes No

Save New

Custom fields can be edited , deleted and reorganized:

	Field Name	Field Type	Cat	Field Options	Actions	
1	origin	field (50)		use in searches: Yes		7002
2	color	field (50)		use in searches: Yes		7003

Modify custom fields order and click on update display order

3-2. Trays menu

From this menu, users have a trays list view. Users can also find a specific tray

FIND

and add new trays records

NEW RECORD

From the trays list view, users can:

- View trays records.
- Edit trays records.
- Harvest trays plants.

- Disposed trays.
- Duplicate trays.
- Print trays barcodes.
- Print all plants barcodes of a tray.
- Delete trays.

Plants manager
Add-ons | Plants manager | Trays

SEEDS TRAYS PLANTS DATA SETUP

Quick Search by ID 1 / 2 > 20 results/page

Tray ID	Tray Name	Tray type	Researcher	Date	Removal Date	Purpose	Plant Limit	Free space	Location	Aracons	Disposed	Sown By	Actions
43	Master tray (modified)	Master tray	Stapan Khomanko	2020-09-25	2023-06-14	test purpose	800	660	RM 842	Yes	No		
23	Master tray 1	Master tray	Stapan Khomanko	2020-09-28	2020-10-30	test purpose	600	280	Green House 42	No	No		
24	Master tray 2	Master tray	Stapan Khomanko	2020-09-28	2020-10-30	test purpose	1400	0	RM 842	No	No		
85	Master tray 2	Master tray		2020-9-30	2023-06-13	test purpose	600	600		No	Yes		
66	gh-Tray-1	Tray	Wanda Wong	2020-11-20	2021-08-25	test purpose	600	600		No	Yes		
89	delete test 1	Tray		2020-10-13	2021-08-25	test purpose	600	599		No	Yes		

For more details on trays management, [see chapter 4.2](#).

3-3. Plants menu

From this menu, users have a plants list view which can be reduced to users live plants

Users can also find a specific plant and add new plants records

From the plants list view, users can:

- View plants records.
- Edit plants records.
- Harvest plants.
- Duplicate plants.
- Print plants barcodes.
- Extract plants samples and registered them in LabCollector samples module.
- Delete plants.

Plants manager
Add-ons | Plants manager | Plants

SEEDS TRAYS PLANTS DATA SETUP

Quick Search by ID 1 / 131 > 20 results/page

Plant ID	Reference	Date	Tray Name	Seed No	Plant ID (cuttings)	Plant Name	Researcher	Ecotype	Age	Harvest Date	Actions
2616	87 - 2		test MC	4227		TEST njana	Wanda Wong			2021-08-26	
2608	89 - 1		delete test 1	4228		gh-ph-1	Wanda Wong			2021-08-25	
2607	44 - 1	2020-10-14	test tray 1 (modified)	4222		test tray 1 seed 1 plant 2	Wanda Wong		972	2023-06-13	

For more details on plants management, [see chapter 6.2](#).

3-4. Seeds menu

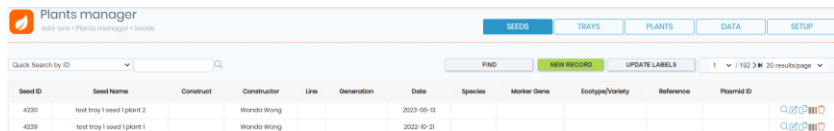
From this menu, users have a seeds list view.

Users can also find a specific seed , add new seeds records

and update seeds labels .

From the seeds list view, users can:

- View seeds records.
- Edit seeds records.
- Duplicate seeds.
- Print seeds barcodes.
- Delete seeds.



The screenshot shows the 'Plants manager' interface with the 'SEEDS' menu selected. Below the menu is a search bar and buttons for 'FIND', 'NEW RECORD', and 'UPDATE LABELS'. A table displays the following data:

Seed ID	Seed Name	Construct	Constructor	Line	Generation	Date	Species	Marker Gene	Ecotype/Variety	Reference	Plasmid ID
4235	test tray 1 seed 1 plant 2		Wanda Wong			2022-09-13					
4229	test tray 1 seed 1 plant 1		Wanda Wong			2022-10-21					

For more details on seeds management, [see chapter 5.3](#).

3-5. "Import" menu

The "Import" menu can be accessed through the Data menu, as shown on the screenshot below.



From this menu, users can import seeds lists and create seeds records. You have to organize your file as indicated.

IMPORT

Choose a data format:

DATE <sep> PLANT FEMALE <sep> SEED <sep> (optional: PHENOTYPE <sep> ...) <linefeed>

DATE <sep> PLANT MALE <sep> SEED <sep> (optional: PHENOTYPES <sep> ...) <linefeed>

DATE <sep> PLANT FEMALE <sep> PLANT MALE <sep> SEED <sep> (optional: PHENOTYPES <sep> ...) <linefeed>

Select field separator: TAB Comma (,) Semicolon (;) Custom separator

Select data to import:

Update Plant harvest date?

Your file has to be in a **text format** (.txt).
Phenotype = parental plant phenotype.

Users can also use this function to update plants harvest dates.

Finally, the import function can be combined with a mobile harvest method, [see chapter 7](#) for more details.

3-6. “Massive” menu

The other menu found on the Data list, is the “Massive” menu. Here, users can perform a massive deletion of their data, based on the selected type: tray, plant or seed. Users should also specify the range of data they wish to delete by inputting the corresponding range of ID numbers.

MASSIVE DELETION

Select data type to delete to ID

Select data type to delete

- Tray
- Plant
- Seed

4- TRAYS

From the Tray menu, users can create and manage trays.

4-1. Create trays

Click on **New Record** button. A form will be displayed.

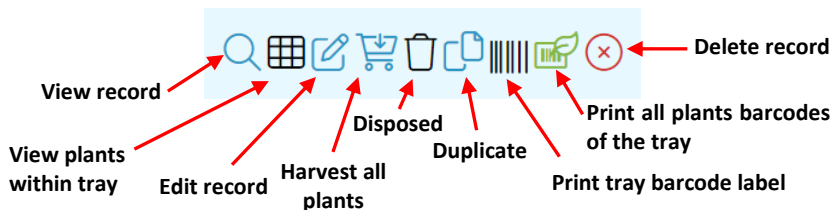
The screenshot shows the 'ADD TRAY' form with the following fields and options:

- Tray Name:
- Tray type: -- Select Type --
- Researcher: Wanda Wong
- Date:
- Removal Date:
- Comments:
- Purpose: test purpose
- Location:
- Plant Limit: 20 (Exact selected, Approximate unselected)
- Aracons: Yes No
- Disposed: Yes No
- Sown By:
- Soil_Type:
- Generate plants to fill up this tray?: (indicated by a red arrow)
- Parent Seed ID: [View Seeds]
- Associated barcode:
- Buttons: Save & Return, Save & Add Another
- Footer: (*) Required fields

Tray purpose, location and limit have to be previously defined ([see chapter 3-1-1](#)). You can choose the “Generate plants to fill up this tray” option. This choice will open the “Parent Seed ID” field in which you can choose the seed with which you want to complete the tray.

4-2. Trays management

From the trays list, users can execute different actions to manage their trays.



4-2-1. View tray record

With this function, users can visualize tray characteristics, visualize tray plants, harvest plants, print tray label and print tray plants labels.

VIEW TRAY - ID: 23

Tray Name: Master tray 1
 Researcher: Stepan Khomenko
 Date: 2020-09-28
 Removal Date: 2020-10-30
 Comments:
 Purpose: test purpose
 Plant Limit: 600
 Location: Green House 42
 Aracons: No
 Disposed: No
 Sown By:
 Associated barcode:
 Soil_Type:

43/PTR

2608/PPL

Close this window

Opens Plants Interface

4-2-2. Edit tray record

With this function, users can edit/modify tray characteristics, visualize tray plants, harvest plants, print tray label and print tray plants labels.

EDIT TRAY - ID: 21

Tray Name:
 Tray type:
 Researcher:
 Date:
 Removal Date:
 Comments:
 Purpose:
 Location:
 Plant Limit:
 Exact Approximate
 Aracons: Yes No
 Disposed: Yes No
 Sown By:
 Soil_Type:
 Associated barcode:

21/PTR

2004/PPL

Opens Plants Interface

(*) Required fields

5- SEEDS

From the Seeds menu, users can create and manage trays.

5-1. Create seeds

Click on **New Record** button. A form will be displayed.

ADD SEED

Seed Name:

Construct:

Constructor: Wanda Wong

Line:

Segregation Ratio:

Comments:

Generation:

Date:

Harvest By:

Species:

Marker Gene:

Other Gene Carried:

Ecotype/Variety:

Reference:


Female Plant ID:

Male Plant ID:

Plasmid ID:

Associated barcode:

Seed_Length:

Select Storage Place: Select Storage Place 
(Locate empty places)

Select Box:

Position in Box:

Storage Comments:

(*) Required fields

Users can add storage locations to their seeds. Seeds storage system is integrated in LabCollector storage browser system (for details on LabCollector storage system management, see LabCollector user guide chapter 6).

5-2. Update seeds labels

With this function, users can quickly update seeds labels. They have just to organize their file as indicated.

UPDATE SEEDS LABELS

Data format: SEED <sep> NEW ASSOCIATE BARCODE <sep> <linefeed>

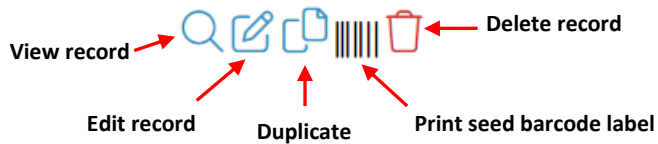
Select field separator: TAB Comma (,) Semicolon (;) Custom separator

Select data to import:

Your file has to be in a **text format** (.txt).

5-3. Seeds management

From the trays list, users can execute different actions to manage their trays.



5-3-1. View seed record

With this function, users can visualize all the information which are related to a seed.

→ Same as the Female Plant

VIEW SEED - ID: 4230

Seed Name: test tray 1 seed 1 plant 2
 Construct:
 Constructor: Wanda Wong
 Line:
 Segregation Ratio:
 Comments:
 Generation:
 Date: 2023-06-13
 Harvest By: Wanda Wong
 Species:
 Marker Gene:
 Other Gene Carried:
 Ecotype/Variety:
 Reference:
 Female Plant ID: 44 - 1
 Male Plant ID: 44 - 1
 Plasmid ID:
 Associated barcode:
 Seed_Length:
 Currently stored in: No storage defined.

N=1

Seed ID: 4230
 Seed Name: test tray 1 seed 1
 Female Plant ID:
 Male Plant ID:
 Associated barcode:

View Plant - ID: 2607

Plant Name: test tray 1 seed 1 plant 2
 Tray ID: 04
 Seed ID: 4232
 Plant ID (cuttings):
 Tray Position: 1
 Researcher: Wanda Wong
 Date: 2023-10-14
 Comments:
 Harvest Date: 2023-06-13
 Ecotype:
 Data Link:
 Associated barcode:
 Phenotypes:
 color:
 characteristics:
 origin:
 testID:

N=1

Seed ID: 4230
 Seed Name: test tray 1 seed 1 plant 2
 Associated barcode:

Close this window

Information related to the parental female plant

6- PLANTS

From the Plants menu, users can create and manage plants. They can also directly registered derivate samples in LabCollector Samples module.

6-1. Create plants

Click on **New Record** button. A form will be displayed.

ADD PLANT

Plant Name: *

Tray ID: * [View Trays]

Seed ID: * [View Seeds]

Plant ID (cuttings): [View Plants]

Plant number: *

Tray Position: *

Researcher: *

Date: *

Harvest Date:

Phenotypes: MT BT WT 15

Comments:

Ecotype:

Data Link:

Associated barcode:

color:

characteristics:

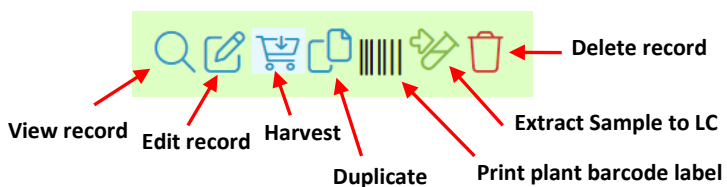
origin:

test123:

Custom fields
(See chapter 3-1-3)

6-2. Plants management

From the plants list, users can execute different actions to manage their plants.



6-2-1. View plant record

With this function, users can visualize all the information which are related to a plant.

Information related to the male and female parental plants

Only if plants were harvested (new seed creation)

6-2-2. Edit plant record


With this function, users can edit/modify plant information as well as corresponding seeds and male and female plants data.

Information on the related seed

Information related to the male and female parental plants

(*) Required fields

6-2-3. Create samples records

Using the **Extract Sample to LC** button , users can directly create a sample record. This new record will be registered in **LabCollector Samples module**. For more details on LabCollector Samples module, you can consult LabCollector user guide.

7- PLANTS MANAGER AND SAMPLE TO BOX

LabCollector **Plants Manager add-on** can be combined with the **Sample to box add-on**. Just scan a seed barcode to automatically create a seed record (in the Plants Manager add-on) and attribute a storage location to this seed.

Sample to box add-on proposes 3 different modes.

7-1. Select an existing box

Select Box

Select your box:

by name

or barcode

Choose your filling orientation:

Horizontal: Vertical:

- 1- Select the box: box name (autocomplete) or box barcode.
- 2- Choose the filling orientation: horizontal or vertical.
- 3- Click on **Validate** button.
- 4- Scan label.
- 5- Choose the data module, in this case: Plants Manager.
- 6- Click on **Update** button. New seeds records are created!

Scan your label:

A1 Name:

A2 Name:

	1	2	3	4	5	6	7	8	9	10
A	1234 01	5678 02	03	04	05	06	07	08	09	10
B	01	02	03	04	05	06	07	08	09	10
C	01	02	03	04	05	06	07	08	09	10
D	01	02	03	04	05	06	07	08	09	10

Box/plate name/ID: box 3 (ID: 18)

Storage location: battiment 1 -> congel 1b

Drawer: RACK C / Position:

Box/plate type: box

Box/plate general description:

Owner: julien

Choose the Data Module: Plants Manager (Seeds)

Sample type for all: Select the type (only for Samples module)

7-2. Choose a box model

Choose a Box Model:

Choose your box model:

James'_6x6 ▾

Choose your filling orientation:

Horizontal: Vertical:

Validate

- 1- Choose a box model.
- 2- Choose the filling orientation: horizontal or vertical.
- 3- Click on **Validate** button.
- 4- Scan label.
- 5- Choose the data module, in this case: Plants Manager.
- 6- Enter a box name.
- 7- Select a storage location, a drawer, a position and a box type.
- 8- This new box can be personal or common.
- 9- Click on **Update** button. New seeds records are created!

Scan your label:

A1 1234 Name:

A2 5678 Name:

	1	2	3	4	5	6	7	8	9	10
A	1234 41 1	5678 42 2	43 3	44 4	45 5	46 6	47 7	48 8	49 9	410 10
B										
C										
D										

Choose the Data Module: Plants Manager (Seeds) ▾

Sample type for all: Select the type ▾ (only for Samples module)

Box/plate name/ID: (Box name. You can read the rack/box barcode into this field directly)

Storage location: Select storage location ▾

Drawer: Position in drawer:

(only available drawers and drawers with empty places are shown.)

Box/plate type: Box (with grid divider) ▾

Box/plate general description:

Owner: Emila ▾ Common box

or

7-3. Create your own box model

Create your own Box Model:

Enter the number of row and columns:

Row x columns (well)

Choose your filling orientation:

Horizontal: Vertical:

Validate

- 1- Create your box: number of rows and columns.
- 2- Choose the filling orientation: horizontal or vertical.
- 3- Click on **Validate** button.
- 4- Scan label.
- 5- Choose the data module, in this case: Plants Manager.
- 6- Enter a box name.
- 7- Select a storage location, a drawer, a position and a box type.
- 8- This new box can be personal or common.
- 9- Click on **Update** button. New seeds records are created!

Scan your label:

A1 1234 Name:

A2 5678 Name:

	1	2	3	4	5	6	7	8	9	10
A	1234 A1 1	5678 A2 2	 A3 3							
B	B1 11	B2 12	B3 13	B4 14	B5 15	B6 16	B7 17	B8 18	B9 19	B10 20
C	C1 21	C2 22	C3 23	C4 24	C5 25	C6 26	C7 27	C8 28	C9 29	C10 30
D	D1 31	D2 32	D3 33	D4 34	D5 35	D6 36	D7 37	D8 38	D9 39	D10 40

Choose the Data Module: (only for Samples module)

Sample type for all: (Box name. You can read the rack/box barcode into this field directly)

Box/plate name/ID:

Storage location:

Drawer: (only available drawers and drawers with empty places are shown.)

Box/plate type:

Box/plate general description:

Owner: Common box

Save or **Export Map to CSV**

8- UPGRADING AND UPDATING

To update or upgrade the **Plants Manager Add-on** module, just download it on our website (www.labcollector.com). Then, unzip the folder and paste files in the following folder:

Programmes > AgileBio > LabCollector > www > LabCollector* > Extra_Module > plantsmanager

*The name of this folder is the laboratory nickname chosen during LabCollector installation.



<http://www.labcollector.com>

sales@agilebio.com

AgileBio USA
5060 Soreham Pl.,
Ste 320
San Diego, CA 92122
USA
Tel +1 347 368 1315
Fax +1 800 453 9128

<http://www.agilebio.com>

AgileBio Headquarters
79 avenue de Fontainebleau
94270 Le Kremlin-Bicetre
FRANCE
Tel 01 41 79 15 85
Fax 01 75 43 06 61