

Terms of Reference (ToR)

Buzuruna Juzuruna - Construction of a “Densiometric Seed-Sorting Column”

1- Presentation of Buzuruna Juzuruna

Buzuruna Juzuruna (BJ) is a Lebanese association, active since 2015 and registered in 2018, created by a network of Lebanese, French and Syrian farmers / agricultural engineers / activists or members of the civil society. Its main objective is to "promote sustainable agriculture in Lebanon through the transmission of knowledge and means of production". Since 2015, the Buzuruna network has been developing different agricultural projects aiming at promoting the techniques and know-how of sustainable agriculture in Lebanon, through short or long training sessions in the school-farm, awareness sessions, exchange of practices, collective gardens, etc.

Over the years, the association has acquired an important collection of heirloom seeds from the Middle East (more than 1 000 varieties of vegetables, flowers, and cereals). Since 2016, the BJ farm-school, located in Saadnayel on a two-hectare plot of land, has the mission of multiplying these heirloom seeds, selecting them, readapting them to the local climate, testing their resistance and quality. The Saadnayel farm serves as an agricultural laboratory, to experiment and disseminate both local varieties and more sustainable techniques and know-how. The team then disseminates these seeds so that they can be cultivated and reappropriated by those who need them most, Lebanese farmers, family gardens in refugee camps, urban gardens, etc. The team regularly makes its expertise available to accompany farmers, collectives and beginners in their transition to agroecology, by offering technical support, adapted training and agricultural inputs produced by the farm (seeds, plants, natural preparations).

The association organizes numerous trainings on different themes related to sustainable agriculture for different audiences. These trainings are implemented with many partners, they are flexible and adapted to the levels and the social and geographical origin of the different participants. Within the framework of these trainings, the association also aims to create, harmonize, translate training curricula on "integrated" agriculture techniques, accessible to all and pedagogical, and then disseminate them to as many people as possible.

Finally, in addition to these activities, the association produces, in an organic way: heirloom seeds, plants, vegetables, fruits, flowers, herbs, processed food products and agricultural inputs (biopesticides or biofertilizers) - intended then for distribution, exchange or sale.

2- Description of the service needed

Buzuruna Juzuruna is seeking for a supplier/manufacturer in Lebanon, able to manufacture a “densiometric seed-sorting column”. This machine is essential for the work of seed production that is the core of our associative project.

Creation of the original plans:

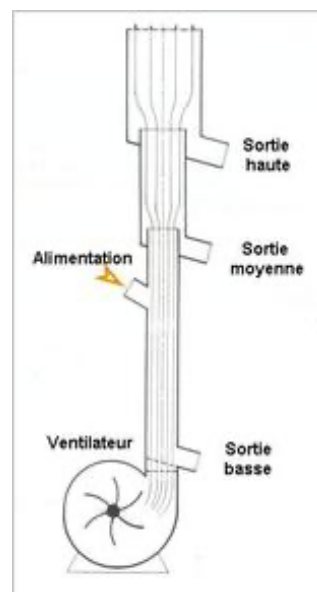
The original plans were created by a French cooperative, called Atelier Paysan, that accompanies farmers in the design and manufacture of farming machinery, to be more independent. The purpose of this machine is to clean seeds (flowers, vegetables, aromatics) in a more professional way, before their commercialization. Concretely, to separate the “good” seeds from the empty ones, but also from pails, piece of leaves or any other impurities, generated by the seed extraction. This machine is very versatile and has a large amplitude: it can sort/clean from very small seeds (such as poppy) to large seeds (such as bean). Buzuruna Juzuruna had previous experiences with using such machine, and had conducted a wide study towards different farmers using such machine or its alternative.

Principle of operation of the machine:

The principle is to use an ascending air flow to sort seeds and impurities according to their mass: the lighter the elements are, the more the air flow carries them to the top of the column.

The dust and other light impurities are recovered at the exit of the column, in a bag arranged for this purpose.

In the model proposed here in plans, 3 outlets, positioned at different heights on the column, allow the recovery of heavy fractions (entrained towards the bottom of the column), but also medium and light.



Materials and equipment:

This machine is composed of both standard parts (to be purchased as such, or slightly modified) and tailored laser cut parts.

Steel: the supports (base / gallows / frame) are made of steel.

Stainless steel: The elements in contact with the seeds are made of stainless steel, to cut and blend. They are about 1.2mm thin.

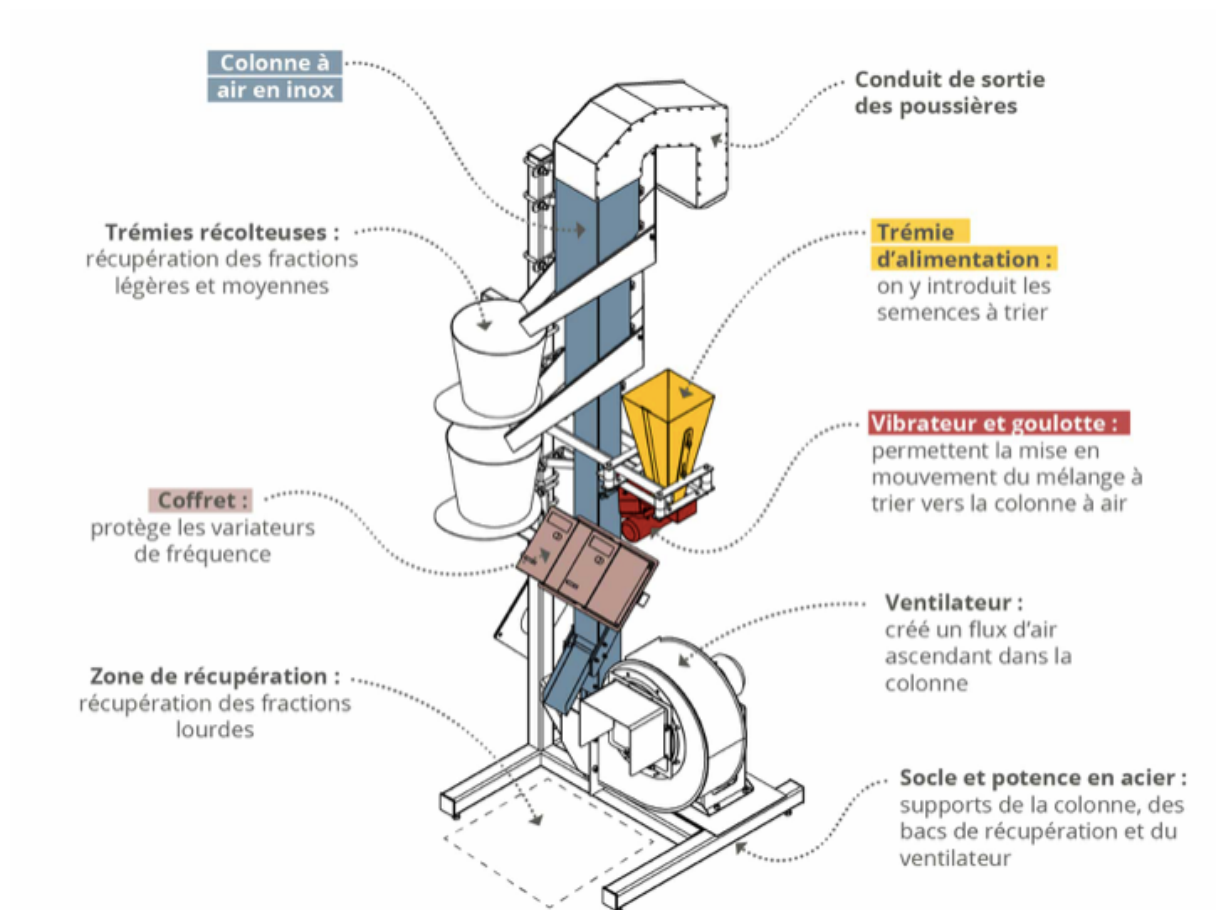
Tempered glass: Tempered glass plates are used on one side of the column body and on one side of the inlet hopper.

➔ For more details, see the document in Annex called “Nomenclature”.

In **Annexes**, as provided documents, we will find:

- 1) The drawing plans in the AutoCAD format of the stainless-steel parts to be laser cut;
- 2) The “Nomenclature” of all the pieces of the machine (inox cut parts, supplies, nuts, small hardware parts, etc.) and their references;
- 3) The PDF “Colonne de tri densimétrique” for the general structure of the machine and the assembly;
- 4) A table summarizing the characteristics of specific items, such as the ventilator, the vibrator, the two frequency inverters.
- 5) Tutoriel of assembly:

<https://www.latelierpaysan.org/IMG/pdf/Tuto%20montage%20Colonne%20à%20air.pdf>



<https://www.latelierpaysan.org/Colonne-de-tri-densimetrique>

3- Criterion of selection

The manufacturer is expected to ensure the following:

- Understand the principles of the machine, study the machine plans and guidelines designed by Atelier Paysan. Adapting the necessary parts to dedicated software and cutting machine, if needed.
- Ensure the Procurement of all necessary supplies, raw materials hardware and electrical parts; opting for the best possible quality, at the best possible price.
- Ensure Laser cutting and bending of the stainless-steel parts;
- Assembly of parts to build the final machine.
- Test the machine and ensure its perfect efficiency, as per the criterion established by Atelier Paysan and Buzuruna Juzuruna.

On a longer term, the manufacturer ensures the following:

- Guarantee of the machine's operation
- 2 years of after sales service

4- Conditions of application

- a. Are eligible to the call: any Lebanese engineering, manufacturing, design, research companies or manufacturers that are working locally and have the necessary equipment and skills to carry on such project.
- b. Deadlines: candidates can send their application to buzuruna.juzuruna@gmail.com before **June, 5th, 2022**.
- c. Buzuruna Juzuruna expects a delivery of the machine finalization of the service by **maximum July 15th, 2022**.
- d. Each application should contain the following:
 - Precise description of the service provided, including processing plan and strategy; names of the sub-contracted suppliers if any; origins, types and quality of raw materials and machines used.
 - Detailed description of the price proposed, including details of prices on the raw material used; engineering and design work; labor work; guarantee and Sales services. The quotation should include all taxes and potential additional costs. The expected modalities of payment should be specified (currency; installment plan; modes of payment).