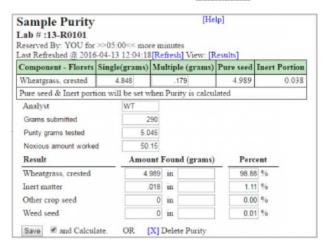# Calculations

Pure Harvest has built in calculations for a number of different tests, this page goes over how those calculations work, and any requirements necessary for the calculations to work correctly.

Calculations Supported:

- Purity
    - Contaminants
- Viability
- Pure Live Seed
- Seed Weight
- Moisture
- Fluorescence (For Annual & Perennial Ryegrass)

Purity

If a "Purity" test is added to the sample, the Purity screen will show a number of different form fields for the raw data.

Enter values in the first column (Amount) for

- Grams Submitted
- Purity Grams Tested (Used as the "/Pur" amount when entering contaminants)
- Noxious Amount Work (Used as the "/Nox" amount when entering contaminants)
- Pure Seed for each crop being tested
- Inert Matter
- Other Crop
- Other Weed

Under Results, you can leave the second column blank. PH will use the Purity Grams for the calculations. You only need to enter this if you want to use some other number. Some labs do a half purity at times, and this allows for that. Once the weights are entered the system can calculate the percentages.

If the crop has Single & Multiple florets, those can be entered in a separate section of the purity form, which will be used to calculated the Pure Seed & Inert Portions in grams.

```
If the "Purity Grams Tested" is not given, it will be set by the calculations by summing the grams found of Pure Seed,Inert Matter, Other Crop &Weed seed.
```
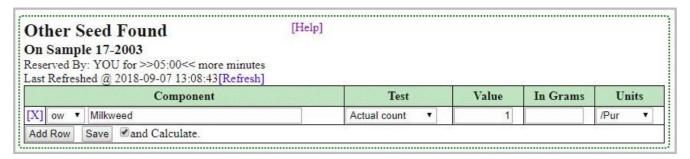
```
If the "Purity Grams Tested" is given, and only one of the following is left blank: Pure Seed, Inert Matter, Other Crop seed, or Weed seed;
the calculations will automatically set the blank value by subtracting the other amounts entered from the Purity Grams Tested
 Example: if Purity grams tested = 25g, Other Crop = 1g, Inert = 1g, and Weed seed = 2g then the calculations will automatically set the Pure seed to 21g
```
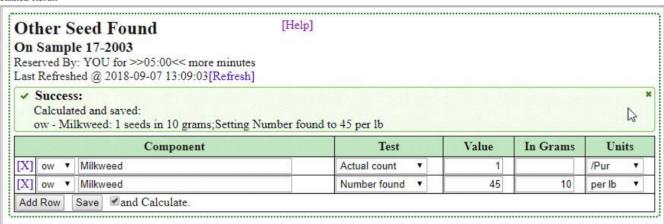
Contaminants

If Other Crop or Weed seed is found in the sample, the number of seeds found should be entered in the Other Seed section of the Purity Screen.

....

Entering the Raw Data

The Calculated Result

Viability

To Calculate Any type of viability test, PH requires the number of seeds tested to be entered.

Counts are entered by rep, and percentages are calculated using rep totals.

Germination

"Germination" tests will also calculate the Dormant and Hard percentages, if Dormant and Hard Seed is reported

Pure Live Seed

Tolerance

if the system variable "d.sam.check_germ_tolerance" is set to "Y" the system will check the tolerance after the calculations have run. Allowed Tolerances can be defined from the Germ Tolerance Ranges screen.

....

When determining if a germination test is out of tolerance, the system totals the counts for each rep and gets the difference between the reps with the min and max counts. It compares that number to the tolerance defined for a germ test with a matching calculated percent. If the difference is greater than the defined tolerance, a warning is displayed.

Note: If a test has been split across extra reps, the extra rep columns will be counted as part of their rep #, (i.e rep_1 and rep_1a are counted as one rep)

Other Tests

Moisture

Seed Weight

Fluorescence