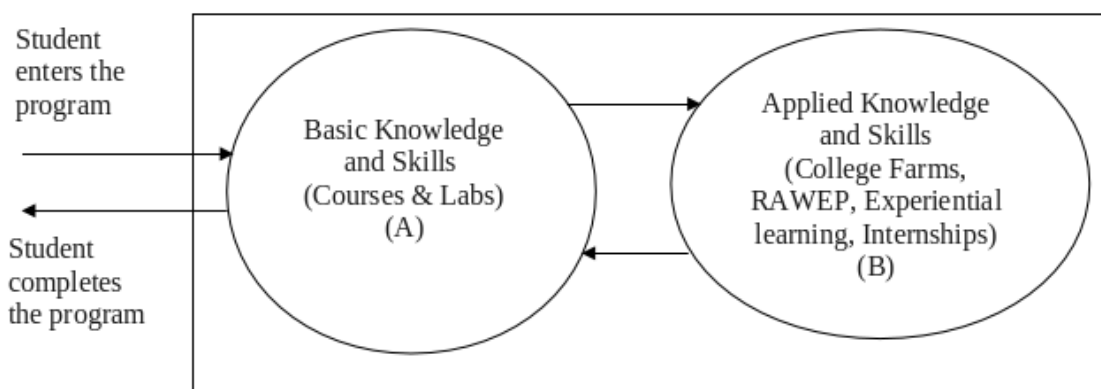




## A Framework of Crop Specific Virtual Labs to Impart Applied Agricultural Knowledge

### Issue of Practical Agricultural Education

- The agriculture graduates should possess expertise and confidence to give the agro-advice to the farmer for curing the ailment in the cropped field.
- Making the correct decision at field level is much more difficult for fresh graduates who have least practical field exposure



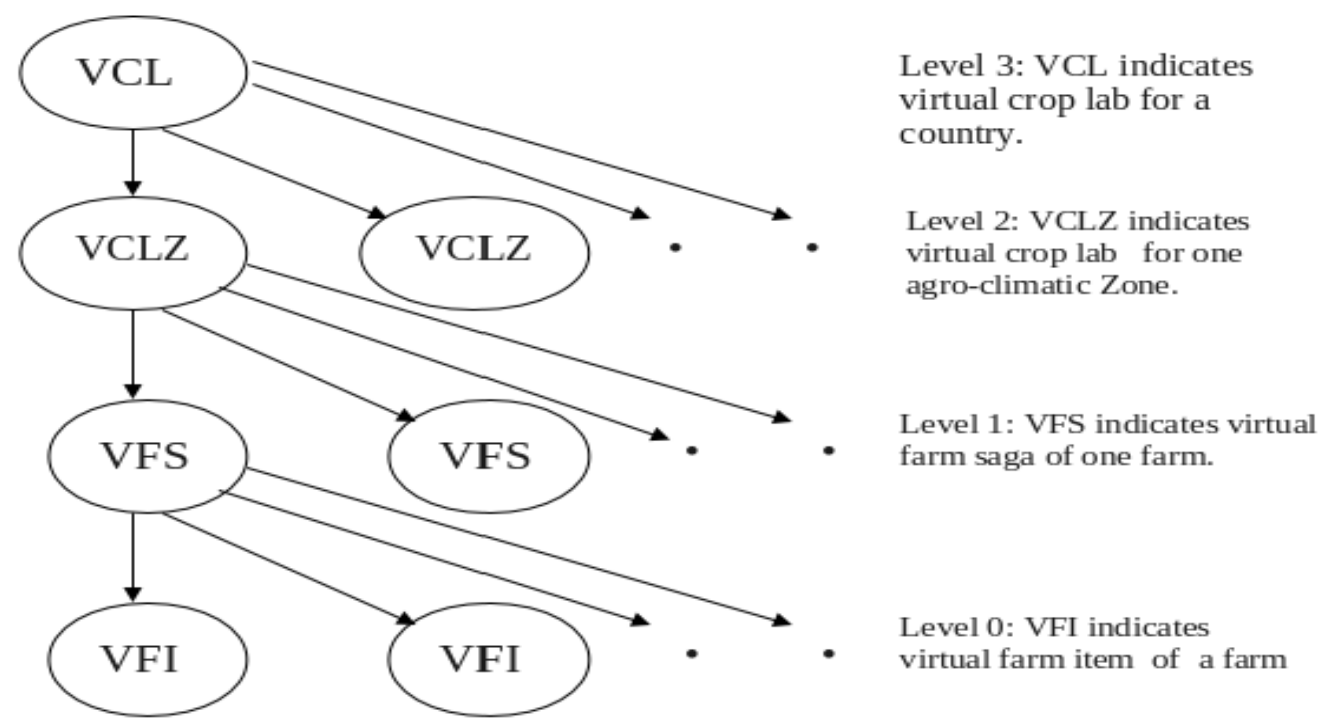
### Issue

- General feeling: the level of practical skills exposed to the students / agri-professionals is not up to the desired level.

### Basic Idea

- Information and communication technologies provide new opportunity so improve the situation.
- It is possible to improve the practical knowledge of students, if we systematically expose them to well organized, indexed and summarized digital data (text, photos and video) of diverse farm situations.

### Proposed Framework



### Virtual Farm Item (VFI)

- The VFI captures enough information so that the agriculture student/professor can understand the farm situation or farm activity by going through it in a virtual manner (without visiting the crop field).
- Photographs/video clips**
- Text written by agri scientist.**
- Q/A:** The questions (and answers) should be such that it should enable the student/teacher to understand the background and other influencing factors for that farm situation.

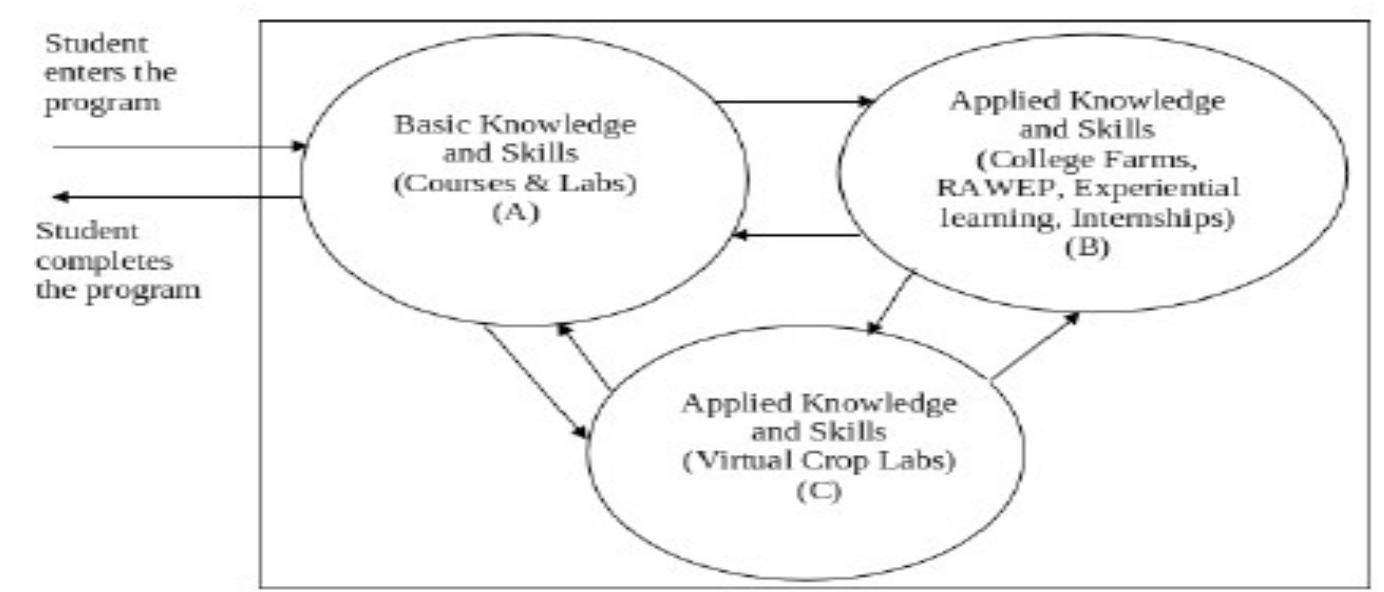
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### Virtual Crop Lab of Zone (VCLZ)

**Virtual Crop Lab of Zone (VCLZ) :** For a given crop, the collection of VFS of  $n$  farms (in different farming situations) constitute VCLZ. The elements of VCLZ are as follows:  $\langle c, \text{Set of VFSs, Summary of VCLZ, } q/a, i \rangle$ .

### Virtual Crop Lab (VCL)

**Virtual Crop Lab:** The virtual crop lab captures all the problems and activities of the crop for all agro-climatic zones of the country. Let crop  $c$  is cultivated in  $m$  micro agro-climatic zones in the country. The collection of VCLZs of  $m$  zones constitute VCL.



### Future Work

- Development is a huge task
- Requires the participation of agriculture / horticulture universities, ICAR institutes
- Making efforts to start a prototype project