spores are going to be haploid. These selected cells will then undergo a series of divisions in order to create the final structure. This is the leptosporangia form in terms of the division that occurs. Finally you get the final sporangio structure that will release the final spores that are haploid. If one cell is selected, it inhibits other cells.

- **Multiple initial-** Have to think of how the cell actually knows to become and how it can actually encounter other cells. The developmental pattern is larger here due to the concerted effort from multiple cells. You end up getting multiple initials then. Multiple cells then create the final spore structure. This will form the sporangio structure.
- Subsequently you'll end up getting a spore variant structure. Whats interesting is that in the final form you're going to have an outer layer of cells and on the inside will have spores. Want to maximize the ability to spread your spores as far as possible in order to take over the earth. This is a land plant and still has a motile sperm gametophyte and thus needs water. The annulus which is the outer layer of cells harbouring the spores inside. Can use the annulus to identify because its quite different. Under normal circumstances its holding the spore inside. However as conditions get dryer and dryer it starts to tighten and starts to shrink a little and so is under tension. It then bursts at the breakage point and all the spores are released. Whole idea is to get them away from the parental plant and into the air so that we able to move away as far as possible. Spores are small and are capable of staying in one place for a long period of time allowing for maximal spore dispersal.
- With the **C-ferns** - think about it as having alteration of generations. Start with a mature spore structure. The sporophyte starts to develop sporangia spore or sori. Then you get spore release which are haploid. then you get the germination of the gametophyte which is the haploid multicellular structure and usually they're relatively small. In terms of what occurs now, you have this male and female thing going on where you get fertilization which means that you definitely need to add water. Then you get the motile sperm and fertilization occurs and the subsequent generation of the sporophyte generation. When you look at the gametophyte you have two identifiable forms [male and the hermaphrodite]. Why are there no females? Don't want a female. With the female it can't self fertilize. There is a survival aspect associated with this. the only way is if a motile sperm lands on an archegonium. However if you're a female and no sperm comes along to fertilize, you cannot self fertilize yourself and the female then ends up dying. Density of males is much higher than hermaphrodites. If an archegonium doesn't get