Seed processing plant layout considerations

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1. Pilot Plan

- Pilot plan shows how the buildings, parking lots and driveways fit on the lot. It also shows highways, utilities, drains, electrical systems, and any other relevant information.
- Starting with the plot plan, add the main roads that border the property.
- Determine where access roads will enter the property.
- Indicate the utilities on the plant.
- Plate the building so that the front faces a road; expansion will occur behind the building.
- Indicate where receiving and delivery will be, and connect this area to the main road.
2. Materials handling considerations

- Materials handling should be part of the planning from the start.
- Product movement costs money, and it must be kept to a minimum.
- The most efficient materials handling involves raw materials being received at one end of the plant with the final product emerging at the other and without backtracking or sidetracking.
• Planning should reduce the travel of product, people, and handling equipment. This will:
  • increase material flow
  • reduce bottlenecks and stoppages
  • reduce unsafe situations and practices
  • increase product quality
• Consideration should also be given to the type of equipment to be used in materials handling, e.g. if forked trucks are to be used, the passages should be wide enough for the truck to pass workers at a safe distance.
• These passages (aisles) must also be kept free of any obstacles or overhanging machinery and be well lit so that the truck operators can see limiting clearances easily.
3. Processing plant layout

• Three main types of processing plant layouts are multistory, single level and combination
• Multistory: Here seed is carried by elevators to the top floor and stored in large bins.
• Processing machines are arranged in a vertical series on the lower floors.
• Flow of seed from one machine down to the next is by gravity.
• Single Level: In this system, seed is moved from one machine to the next by elevators placed between the machines.

• This layout enables one person to supervise the processing line without running up and downstairs.

• Closer supervision of all operations can thus be maintained.
• Combined Designs: These involve a compromise between the single and multistory system.
• Whatever the design, equipment should be arranged to provide:
  1. a sequence of cleaning and handling that is proper, efficient, complete, and as simple as possible.
• 2. economical distribution and maintenance of space
• 3. orderly and continuous flow of seed and waste products with a minimum cost
• 4. flexibility to handle different seed that require different processing.
• 5. possibility of orderly expansion as capacity needs increase.
• 6. maximum safety and comfort of operating personnel
• 7. effective and economical means of handling waste products
THANK YOU

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