

# **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
- Place 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

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- Consideration should also be given to the type of equipment to be used in materials handling,
- e.g. if forklift 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

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**THANK YOU**

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