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Guidance for best practices for palletizing of goods

- **Type of pallet** used must respect international standards (e.g. ISPM 15). Pallets must be in good conditions and suitable for the load to be transported (e.g. EUR-EPAL)
- **Pallet layout** must be optimized to maximize container loading.
- **No overhang:** Overhanging exposes freight to damage and decreases a pallet's strength. Pallet overhang can reduce top to bottom compression up to 30%.
- **Stretch film:** stretch film must be of good quality
 - recommended: 23mic blown PE stretch – width 500 mm
 - resistant to long storage period up to 30°C)
 - containment force must be optimized to maintain the load, it can be influenced by:
 - stretch up to 250-300% to obtain 6mm film thickness
 - number of film layers around the pallet
 - The stretch film must be locked on the pallet.
 - Breathable stretch film must be used for bagged commodities.
- Ensure **proper stowage** so that there is minimum free movement of commodities during transit
- Stack cartons **well aligned** on the top of each other
- Depending on the type of commodity, supplier might need to add **pallet corner** or to **strap the load**. The use of **slip sheet on the pallet** before stacking cartons might also be required to avoid compression strength deprivation. On wooden pallets, spaces between decks can be up to 4 inches, which results in no support of the boxes' bottom. The use of **slip sheet on the pallet** before stacking bags are required to avoid direct contact between bags and wooden pallet.
- WFP recommends that at least the 3 first bottom carton layers must be placed as **column stacking** the rest is recommended to **be interlocked** (cross stacking) for load stability.



Explicative scheme of principle of the 3 bottom layers as column stacking



Source: Ipack