

A NEW STANDARD *for* SPUD STORAGE . . .

A NEW STANDARD for SPUD STORAGE PERFORMANCE

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Potato storage has come a long way in the last 35 years. Often the progress has come in little steps, bit by bit; but, with some noteworthy advances at times. And, if you are contemplating a new storage, it does pay to be aware of the progress. Nowhere in the world has more beneficial storage progress taken place recently than in the Columbia Basin.

The difference between older, and newer, tractors, planters, harvesters, and other equipment; are details that truly affect performance. Newer, more modern technology provides the difference. And, details that affect performance are what make a difference in a storage with current technology today. This article is intended to simply shine the light on the single most-important development that can make a difference to your “bottom line” from spuds out of storage. This development has proven to set a new standard for storage performance.

The AirEverywhere Concrete under-floor air distribution system, developed initially for onion storage in 1990 has elevated potato storage performance to a new level. AirEverywhere is the single most beneficial step since the advent of tight temperature control and high-performance humidification. Vastly superior air distribution and the design details associated with AirEverywhere, yield storage performance that minimizes weight loss and quality losses, significantly reduces spoilage, and provides storage management tools unavailable with air pipe and other air distribution methods.



AirEverywhere’s narrow $\frac{7}{8}$ ”-wide by 16” long vents on the floor surface are uniformly spaced such that potatoes on the floor are all within 12” from a vent. Clearly, air distribution is excellent.

AirEverywhere Floor benefits are HUGE:

- More uniform temperature control
- Allowing reduced airflow rates that provide power savings
- The assurance of more air to problem potatoes
- More uniform sprout inhibitor distribution
- Significantly better humidification
- Consequently, noticeably less weight loss; and therefore,
- Less quality loss
- More effective storage management



AirEverywhere PROVIDES SIGNIFICANTLY BETTER HUMIDIFICATION:

The under-floor concrete absorbs and holds a massive amount of water and stays moist, with the assurance of getting saturated air to more potatoes. The whole under-floor arrangement is *part* of the humidification system. No humidity losses to the supply air take place due to impingement, like the losses caused by corrugations in air pipe. And gravity prevents free water from entering the pile. Consequently, another of the weak links in storage with air pipe is addressed: Supply air with significantly better humidification gets to the pile, without putting free water on the spuds.

Better humidification to the pile, without free water coating the potatoes, means more effective suberization, significantly less weight loss, and consequently much less pressure bruise and quality losses.



Monitoring humidification and associated equipment details to make certain that no free water is blown onto potatoes is a concern with air pipe. The under-floor concrete ducts provide the best assurance for getting saturated supply air to the pile with the comfort that no free water will enter the pile. The storage floor surface is never wet, yet saturated air is uniformly distributed to the pile.

In addition, consider the benefits of storing without air pipe:

- No air pipe handling, moving, placing, cleaning, or repair
- No air pipe replacement
- No potato damage while removing air pipe
- Allows forklift and equipment traffic for flexible raw product placement
- Flexible storage in bulk combined with pallet boxes

Consider the flexibility of handling several different varieties in a single bay, or various seed lots in pallet boxes. The flexibility of storage bay use is a plus, and storage performance is exceptional.



There's no point in doing the best job you can for five or six months to produce a top-quality crop at harvest, only to go into storage with that crop for another six, eight or even ten months, and realize more weight loss, quality loss, and spoilage than necessary. A storage is the tool you depend on for the "second half" of your potato program. Whatever you decide to build must be cost-effective. And, with tight margins and fierce competition, AirEverywhere is a tool that significantly increases return from product out of storage, and is a boon to storage management, too.

Prior to the AirEverywhere Floor it is easy to agree that the weakest element in modern potato storage has been air distribution. Air Pipe has been the primary air distribution technique for a long, long time. For some reason airflow rates have increased in the last 30 years from 10 cfm/ton to 12 cfm, to 15, 17, 20, and now even 22 cfm/ton, or more are requested. It only takes about 3 cfm/ton to exhaust the heat of respiration for a healthy pile, and it is clearly impossible to uniformly supply saturated air to the pile with airpipe during high cfm airflow rates. The corrugations in air pipe cause impingement that wrings moisture out of the air. Consequently it is very easy to understand why an AirEverywhere concrete under-floor air distribution system is the new standard for potato storage performance.

Try a simple test: Find a storage being unloaded, today. Any pressure bruise you find means major weight loss. Assuming you are profitable, any weight loss that can be avoided is unacceptable.



A well-designed storage, with modern technology that includes the AirEverywhere Floor, is the standard for storage performance today.