

PAKISTAN AGRICULTURE DEVELOPMENT (PAD)



GrainPro, Inc. Collapsible Drying Case

chili farmers. GrainPro specializes in safe storage and drying of agricultural commodities and seeds.

Though Pakistan is one of the top five chili producing countries in the world, with 50,000 hectares under cultivation, it provides only 7.2 percent of the world's chilies. Their export potential is constrained due to high incidence of aflatoxin, fungus and bacteria. Infection occurs during every stage of production, especially from picking, drying and storing. When chilies are dried on the open

RED HOT SUCCESS

PADDING INCOMES FOR CHILI GROWERS

The USDA-funded **Pakistan Agriculture Development (PAD)** project, implemented by Winrock International, works with growers of tomatoes, red chilies, bananas and dates in Pakistan's Punjab and Sindh provinces to increase their incomes. The project accomplishes this through a combination of strategic interventions, including the introduction of modern technologies, access to higher value markets and increased availability of financial services.

Through this activity, Winrock and GrainPro, Inc., a U.S.-based company, are introducing Collapsible Drying Cases (CDC) and storage bags to Pakistan's

– PROJECT GOALS –



39,192

individuals trained on food security and production



76,850 MT

of commodities sold by project-assisted agriculture producers



6,448

hectares of land under improved technique and technology



ground, they gather dust, which invites fungus into the crop. Similarly, storing chilies in unhygienic conditions (dirty, worn and unsuitable bags) causes further damage.

To reduce the likelihood of aflatoxin exposure during the post-harvest process, Winrock initiated the first trial in Pakistan of drying red chilies on GrainPro’s CDC at Kunri in Sindh province in December 2016. The dried chilies were then stored in hermetic polyethylene bags supplied by GrainPro, as well as in old jute bags traditionally used by chili farmers. These bags were opened after a storage period of seven months to compare the quality of chilies stored.

Red chilies stored in GrainPro’s hermetic bags showed no ill effects due to weather during the storage period. While the chilies stored in jute bags lost their color, those in the hermetic bags remained a brilliant red. The aroma and moisture content of the chilies stored in the GrainPro bags did not change during the storage period.



Comparison of color after storage of 7 months in GrainPro bags and jute bags

The potential for increasing exports of whole, powdered and crushed chilies in consumer packs is very high, provided that PAD-assisted chili crops meet the stringent quality requirements of importing countries by preventing contamination from external sources during harvesting, post-harvest handling, processing and storage. This can be achieved through the continued use of GrainPro technologies that reduce contaminate exposures, as well as an integrated approach with the collective efforts of farmers, processors and traders.



Longi (Dandi Cut) Results				
	Before Drying	After Drying for 10 days	After 7 months of Storage in Hermetic Bag	After 7 months of Storage in Jute Bag
Moisture	71.70%	9.64%	9.80%	9.80%
Total Aflatoxin	12.1 PPB	15.80 PPB	8 PPB	11 PPB
Damage	2.90%	4.94%	5.80%	8.00%
Discolored	2.00%	5.80%	4.10%	5.00%
Loose Seeds	0.10%	0.30%	0.20%	3.50%
Impurities	0.80%	0.86%	0.40%	3.64%