RESEARCH NOTE

DRYING BLACK PEPPER ON POLYETHYLENE MATERIALS

Black pepper is traditionally dried on floors smeared with cowdung or on bamboo mats, due to which the dried product gets contaminated with mammalian excreta like cowdung besides rodents' excreta. This results in a substandard produce for export. Therefore attempts are being made to develop alternate drying materials which are economically viable and technically sound. A study was conducted in this regard, at the Experimental Farm of NRCS at Peruvannamuzhi, in collaboration with the Spices Board, Cochin in the pepper harvesting season January—February, 1991 using different drying materials.

The materials used for drying black pepper are: (1) Low density polyethylene film (LDPE) of 8′ × 5′. (2) Reinforced high density polyethylene fabric (HDPE) of 8′ × 5′. (3) Bamboo mats (8′ × 5′) and (4) Cement concrete floor. The polyethylene materials are black coloured.

The LDPE and HDPE materials were supplied by the Spices Board, Cochin.

Fully matured green berries of cv. Karimunda were harvested, despiked and cleaned of dirt and pinheads. 15 kg of the harvested pepper was spread on the above mentioned drying materials. The duration of drying per day was kept uniform for all the treatments. The berries were turned uniformly 3 to 4 times each day. All the samples were dried to crisp to a moisture level of 8 to 10%. The weight of the dried product was 5.4 kg in all the treatments, recording a driage of 36%.

The smooth surface of the Polyethylene materials had the definite advantage of easy handling, while spreading and heaping pepper over the rough bamboo mats. In bamboo mats, of course, farmers use small flat sticks to spread pepper but if the pepper is spread by hand only, then the fingers get injured while spreading pepper and collecting them after the day's drying is over.

The dried materials could also be stored in the evening in the polyethylene materials as it can be folded to convenient size and hence avoids transport of the material every morning to the drying yard. However great care is necessary while spreading pepper on polyethylene materials, as the scattering of the sample is very high on the smooth surface, which do not occur in the rough bamboo mats.

There was no difference in the time required for the drying of the sample on all the drying materials, except for a marginal difference in the concrete floor, which may be due to the dissipation of heat on the cemented floor (Table).

Table : Time required for drying in different treatments

1.	LDPE film . . .	17 hours 42 minutes
2.	Reinforced HDPE fabric .	16 hours 45 minutes
3.	Cement /Concrete flooring .	19 hours 08 minutes
4.	Bamboo mats . . .	16 hours 30 minutes

The colour of the dried product is uniform in all the treatments. The quality constituents also were unaffected.

But for the high cost of polyethylene materials, the HDPE fabric is advantageous over the other three treatments, especially in large industries and farms where large quantity of pepper has to be dried. The product will be free of dust, animal excreta and other contaminants.

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