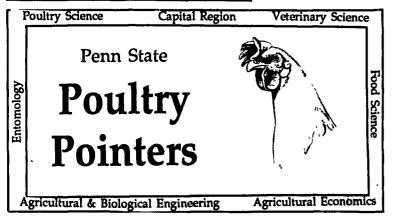
D6-Lancaster Farming, Saturday, July 24, 1993



RESPIRATORY **PROTECTION FOR POULTRY WORKERS Dennis J. Murphy Professor Of Agricultural And Biological Engineering**

A wide variety of hazards can be found lurking on most poultry farms. Many of these hazards are common to other farm operations as well. For instance, tractor and machinery hazards, noise, and electrical and fire hazards are fairly typical.

Another broadly based hazard, found particularly in many poultry houses, is hazardous respirable dust. Respirable dusts are the microscopic-sized organic dust particles that come from poultry

feathers, feed, and manure.

The most typical symptoms include a scratchy throat, a constant cough, sputum or phlegm, and a running nose. Poultry dust can affect any exposed person within a short period of time, and in extreme cases have forced farm workers to stay out of poultry buildings and to seek other work.

Response to poultry dust varies from person to person, may affect any part of the respiratory tract, and may include inflammatory, toxic, or allergic processes. Ignoring the symptoms caused by inhaling poultry dust can lead to longterm respiratory problems and diseases such as acute or chronic bronchitis, occupational asthma. a systemic influenza like reaction, or

chronic sinusitis.

Good management practices can help to minimize dust generation in poultry houses, but it isn't practical to reduce all respirable dust. To reduce the harmful effects of respirable dust, approved respiratory protection should be worn. The type of respirator appropriate for use in poultry houses is referred. to as an air-purifying respirator. The person breathes through a filtering medium that traps respirable dust. Because the wearer must pull air through the filter, all airpurifying respirators put added stress on the lungs. For this reason, if you suffer or suspect that you suffer from respiratory problems such as asthma, lung, or cardiovascular disease, check with a doctor to make sure you are able to wear one

There are three primary types of air-purifying respirators appropriate for use in poultry houses. The least expensive models are commonly called dust/mist respirators. This is the least effective model for filtering respirable dust because the respirator does not seal tightly against the wearer's face, and considerable amounts of dust may leak

into the respirator and be breathed in. They are usually identifiable by their two thin elastic bands and are priced from \$1 to \$5.

The second type of air-purifying respirator is the cartridge respirator. This respirator normally comes in different sizes, has a rubber face piece, adjustable elastic straps, and can be purchased with dust/mists cartridges only or in combination with chemical vapor cartridges. When purchased in combination, the dust/mists protection usually comes as a prefilter or the chemical cartridge filter. Both half-mask and full-face models are available. Prices range widely, from about \$25 for a disposable half-mask to \$150 for reusable full-face piece models. The cartridge respirator, if fitted properly, can provide substantial protection for most wearers.

The third type of air-purifying respirator is named the powered air-purifying respirator (PAPR). This type respirator utilizes a motorized blower that forces air through the filtering medium. It makes breathing easier for the wearer, so this type device might be recommended by a doctor for someone with a minor respiratory or cardiovascular ailment. They tend to be cooler, too, because of a constant stream of air over the wearer's face. The blower is usual. ly powered by a rechargeable bat. tery pack strapped onto the wear. er's waist. Some PAPRs are cap. able of filtering out nearly all harmful respirable particles, and may be the only type of respirator that provides satisfactory protec. tion. This situation may occur when early symptoms of respiratory distress are ignored. PAPRs range in price from about \$200 to \$800.

Whichever specific type of airpurifying respirator is appropriate for your individual situation, be sure that the respirator is a NIOSH. or MSHA-approved respirator. All approved respirators are marked with a "TC" number and the ini-tials "NIOSH" or "MSHA" somewhere on the respirator. The common nuisance dust mask, marked by a single elastic strap, and often sold by the boxfull, is not an approved respirator and will not have a "TC" number. This type of dust mask is not effective at filtering respirable dust.

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