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PAPER TITLE   ON THE PROBLEM OF EFFECTIVENESS ESTIMATION FOR
COUNTERMEASURES, INTERVENTION LEVELS AND DECISION MAKING

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In estimation of the effectiveness of countermeasures (CMs) and
choices of justified intervention levels use is made of the cost-
effectiveness analysis (CEA), cost-benefit analysis (CBA), as well
as corresponding economical, radiological parameters and different
variants of the multi-attribute utility analysis. The authors
works give the evidence that CM implementation under conditions of
non-uniform contamination of lands and distinguishing of agricultural
production obtained as "pure" (with contamination levels below
the DILs) and "dirty" (accordingly, those above the DILs) can result
in increase of (internal) collective doses for the population.
The CEA is not applicable under these conditions, and standard
algorithms of CBA require a generalization for the correct use in
investigation of the scenarios stated. The CBA generalizations
obtained give the possibility to estimate effectiveness of CMs
(including the cases with consideration of various uses of "pure"
and "dirty" production), and to define "optimum" DILs for various
strategies of using the production. Estimations of countermeasures
are considered with concrete examples based on a system of averted
collective dose, costs of CM implementation, costs of aversion of
unit collective doses (CEA), total detriment and complete CBA.
Different criteria are shown to render preference to different CMs.
In this connection, when it is decided to initiate the most
efficient ("optimum") CMs,- along with consideration of the problem
of decision making with uncertainty, also problems of multiple crite-
ria (comparison/preference of different criteria) should be taken
into account.