

Questions “Effects due to HSR on Agriculture” from CHSRA  
and  
Approaches for Effects due to HSR upon Agriculture(Draft)

1. Preface

- Japan’s agricultural scale is extremely smaller than that in U.S.A., e.g., farm management area in Japan is less than a hundredth part of that in U.S.A., (1.6ha in Japan, 180ha in USA), so that the following Japanese way of compensation is not always applicable with no change, but for your reference. We hope you find it informative.

2. Compensation on Agriculture/Livestock Industries in Japan

(1) Way of Compensation

- In Japan, environmental assessment is carried out on existing-in-nature fauna and flora and the ecosystem as implementation items. The assessment is not aiming at the effects on vesture and livestock by agriculture/livestock industries.
- Therefore, with respect to the effects due to HSR upon agriculture/livestock industries, individual negotiation is applied.

(2) Implementation Methods on Compensation

- If the effects are not clear even from the past cases, monitoring study is executed both in pre/post construction and in pre/post inauguration of HSR. If it is recognized, as a result of the study, that the compensation is needed, we make compensation for it.
- (e.g., Compensation due to lack of sunlight in rice cropping (refer to Exhibit 1))

(3) Expected Monitoring Methods in California (Draft)

- Effects on amount of expressing milk by cow
  - Measure the amount of expressing milk on the basis of sampling before the inauguration of HSR. (The number of necessary cows is statistically indicated)
  - Measure the same item after the inauguration of HSR.
  - If there is a difference in the amount of expressing milk between before and after the inauguration of HSR, then implementing agencies compensate it.
- Effects on almond pollination
  - Investigate the yield amount by distance-base meshing from railway alignment before the inauguration of HSR.
  - Investigate the same item after the inauguration of HSR.
  - If there is a difference in the yield amount between before and after the inauguration of HSR, then implementing agencies compensate it.

Japanese approaches to the issues related with questions from CHSRA

It is difficult to make direct answers to the questions from CHSRA because the situation of Japanese agriculture and livestock industries is different from that of U.S. as shown above. Therefore, we give you the approaches to the similar issues in Japan as follows:

Questions	Japanese approach
<p>a) The effect HS trains would have on bee colonies which are very important to pollinate the crops (apparently particularly important to almonds).</p> <p>e) What effects the wind from high-speed trains passing by crops in blossom would have on their pollination? (e.g., Walnuts and grapes).</p>	<p>a) There is no case of compensation.</p> <p>e) There is no case of compensation.</p>
<p>g) What effects does the noise and vibrations of high-speed trains have on the milk production of dairy cows?</p> <p>h) What effects does the noise and vibrations of high-speed trains have on the breeding patterns of livestock?</p>	<p>g) There is no case of compensation.</p> <p>h) There is no case of compensation.</p>
<p>b) Whether there should be restrictions on aerial (aircraft) crop spraying of insecticides due to the proximity of high-speed rail passengers.</p>	<p>There is the case of aerial crop spraying along a viaduct from a 2m height using a radio-controlled helicopter. There is no restriction because it is not assumed to have the effect on trains. (Exhibit 2)</p>
<p>c) What distance from the track would farming be able to continue productively?</p> <p>d) How wide is the real estate take when a two track HS rail system is built through agricultural lands?</p>	<p>It is required to secure the necessary right-of way for constructing railway structures along the proposed alignment. It is not related to land category. (Exhibit 3)</p>
<p>f) Californian farming is very dependent on gravitationally fed irrigation systems. What experience exists on correcting irrigation systems when high-speed train systems are built through farm lands?</p>	<p>In Japan, viaduct for main tracks is adopted to avoid the effect to irrigation systems. (Exhibit 4)</p>
<p>i) High-speed train systems often are built diagonally through farm lands, making certain parcels inaccessible or less efficient to farm. What has been done to resolve this issue in other countries who have built HSR?</p>	<p>New road is constructed for an area where the railway runs through and makes remaining land inaccessible. In addition, when the land separation by the railway causes decline of remaining land price or value, the loss is compensated. (Exhibit 5)</p>