

Technology Fact Sheet

Gypsum melioration of alkali soilsⁱ

- 1) **Sector:** Agriculture
- 2) **Subsector:** Soil degradation
- 3) **Technology Name:** Gypsum melioration of alkali soils
- 4) **Recommended option of technology:** No till Technology
- 5) **Scale:** Alkali soils propagation areas in East Georgia (Dedoplistskaro, Signakhi, Gurjaani, Sagarejo and Gardabani administrative districts)
- 6) **Availability:** The recommended technology is extremely expensive, so that local farmers and agrofirms would not be able to implement it in practice and hence this is a state prerogative

7) **Background/notes (short description of the technology option)**

At the background of meliorative tillage the application of gypsum, the introduction by overdosing of organic and mineral fertilizers, sowing of perennial grasses and systematic seederation of the plot

8) **Implementation assumptions (how the technology will be implemented and diffused across the sub-sector)**

The recommended technology is less accessible to farmers, as it is a very expensive measure and correspondingly, its practical introduction is impossible. Therefore, the implementation of this technology is a state prerogative

9) **Impact statements**

- **Social development priorities:** The technology is important to tackle such social problems as the eradication of poverty and holding up of ecomigration
- **Economic development priorities:** The technology is important for the development of such priority sector of country's economy as the agriculture is. The quality and productivity of land is of major importance for the development of agriculture
- **Environmental development priorities:** The alkalization of soil is promoted by the rise in temperature and decline in precipitation, both being forecasted in the current century
- **Other factors:** The gypsum of alkali soils will increase their fertility and grow the productivity of crops. The machinery for the implementation of recommended technology is available at the international market

10) Costs (US\$)

- **Capital costs over 10 years:** The gypsum melioration of 1ha of land costs 950 USD
- **Effectiveness of technology:** The application of recommended technology will increase the fertility of alkali soils and rise the crop productivity
- **Barriers**
 - Farmers are aware of the necessity to gypsum the alkali soils, but this measure is not affordable to them mainly for its expensiveness.
 - Legislation does not exist on the protection of agricultural lands and on retaining of their fertility, which determines the rights and obligations of land owner in relation with soil protection

ⁱ This fact sheet has been extracted from TNA Report - Adaptation for Georgia. You can access the complete report from the TNA project website <http://tech-action.org/>