Uzbekistan – 2030: Rethinking the approach to formulating food security strategy

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Uzbekistan’s approach to Food Security 1991-2014

Starting position in 1991:
- Uzbekistan – a net importer of basic foods;
- National agriculture heavily specialized in cotton-growing;
- Hard currency revenues and reserves insufficient to close gap by imports;
- Importance to strike a delicate balance to achieve a number of development goals
  ➔ Food Security – one of the Priority issues for Government
  ➔ Government takes a pro-active role in the food policy regulation process

Policies employed:
- Restructuring of the agricultural output mix;
- Institutional reforms in agriculture;
- Welfare improvement policies (price controls, social assistance to the target groups;)
- National nutrition policy.

Welfare improvement policy:
GDP per capita and poverty rate

Institutional reforms in agriculture: Structure of rural enterprises by categories, %

National nutrition policy:
Flour fortification & salt iodization

Restructuring of the agricultural output mix: structure of the sown area by types of crops(%)
Uzbekistan’s Food Policy: Main Outcomes

- Grain independence as well as self-sufficiency in basic foods is attained;
- Steep rise in crop yield and output of meat, eggs, potatoes, fruit & vegetables;
- Improved access to the basic foods;
- Improved quality of nutrition, decline in child mortality and improvement in anthropometric indicators;

→ Uzbekistan’s Food Policy proved its effectiveness and averted the threats to the nation’s food security;

→ Elements of Uzbekistan’s Food policy are now widely recognized and considered as internationally accepted best practices.
How to sustain the achieved results: 
Main challenges

- Current and expected trends in the global and national economy are posing new challenges for sustaining nation’s food security in the long term:

- Population growth and change in the demographic pattern + growth of personal income → transformations of the lifestyle and behavioral stereotypes → increased demand for food and transformed food consumption pattern

- Aggravating problems of deteriorating land quality and diminishing water supply (due to the climatic and geopolitical factors)

- To cope with the new challenges more comprehensive and complex approaches, methods and policy instruments need to be implemented
Food Security should be considered as an integrated concept incorporating 3 key dimensions.

The principal benchmarks of food policy should be determined in the three key areas:

- **Goal 1** – to ensure the availability of the required amount of food;
- **Goal 2** – to ensure the access to the essential foods for all the strata of the population;
- **Goal 3** – to maintain a balanced and high-quality nutrition in order to improve the nation’s gene pool.
Goal 1: Food Availability

Projections of food production and consumption in 2030 → inertial development pattern will lead to the deficit of food and will not ensure the availability of the required amount of food.

Scenarios to cover the deficit:

- **Scenario 1** – sustaining a balance between the consumption and production of food by:
  - boosting productivity and crop yield;
  - expanding the sown area.

- **Scenario 2** – focus on production of foods in which Uzbekistan has a comparative advantage
  - Reallocate 42 thou. ha from grain to fruit and 60 thou. ha from cotton to vegetables;
  - Increase crop yield of fruit twice, of vegetables – by 1.6 times.

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**Scenario 2. Focus on production of crops with the comparative advantage**

<table>
<thead>
<tr>
<th></th>
<th>Vegetables VS Cotton</th>
<th>Fruit VS Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in the sown area, thou. ha</td>
<td>60</td>
<td>-60</td>
</tr>
<tr>
<td>Change in yields, centners per hectare</td>
<td>180</td>
<td>1.2</td>
</tr>
<tr>
<td>Change in output, thou. tons</td>
<td>5810.4</td>
<td>-11.94</td>
</tr>
<tr>
<td>Change in production costs, bln soums</td>
<td>1154.4</td>
<td>-59.8</td>
</tr>
<tr>
<td>Change in export revenues (import costs), bln. USD</td>
<td>2232.2</td>
<td>-256.4</td>
</tr>
<tr>
<td>Additional investments, bln USD</td>
<td>728.36</td>
<td>1576.7</td>
</tr>
<tr>
<td>Change in employment</td>
<td>125.8</td>
<td>-28.2</td>
</tr>
<tr>
<td>Total benefit, bln USD</td>
<td>1384.2</td>
<td>3398.2</td>
</tr>
<tr>
<td>New jobs, thou pers.</td>
<td>97.6</td>
<td>36</td>
</tr>
</tbody>
</table>
**Goal 1: Food Availability: Recommendations to implement the scenarios**

**Effective implementation of either of the scenarios will require to:**

1) Improve the water management and water use system to produce the required amounts of food:
   - Drip irrigation is applied for 100,000 ha
   - Investments of 455.4 mln USD are required
   - 30% less fertilizers are needed to grow crops
   - Production costs decrease
   - Productivity and total revenue increase by 40%

2) Introduce advanced agro-technologies to raise the crop yield and livestock productivity:
   - Land laser levelling technology is introduced
   - Reduction of mechanisation costs by 14%
   - Reduction of labor costs by 23%
   - Decrease of water use by 30%
   - Rise of productivity by 4 centners per ha
   - Profitability increase by 22% in a year and by 37% in 2 years

3) Step up research and development in agriculture to create more efficient local varieties of plants and breeds of animals and improve the quality of animal-husbandry technologies (90 mln. USD)

4) Expand and improve the quality of the veterinary services: in 2030 30,3 thousand veterinary personnel need to be present within the sector. (Now - 8,3 thousand specialists (27% of the required level))
Goal 2: Food Accessibility

1) Reformation of the agrarian institutions and optimization of the farm size by expanding the animal farms to 1000 heads of livestock, vegetable-growing farms - to 85 ha, fruit-growing farms - to 40 ha.

![Flowchart: Size of animal farms is expanded to 1000 heads → Extra investments of 929,6 mln USD required → Due to the economies of scale productivity of farms increase by 35%]

2) Create an efficient system of procurements, distribution, processing and sales of agricultural food products
   a) Establish an efficient cold storage system for fresh and processed foods
   b) Develop an efficient system of food processing
   c) Develop the efficient sales, marketing and distribution system
      - Reformation of institutions in agriculture will require the shift from bazaar trade to the grocery store and supermarket trade to minimize transaction, transportation and administrative costs and ensure food safety
      - By 2030, 70% of retail food sales should take place in stores and supermarkets (now – 37%)
Goal 3: Balanced nutrition and Quality of Food

1) Balanced and high-quality nutrition is essential to improve the nation’s gene pool

2) If the balanced and high-quality diet is provided benefits in the terms of people’s health and human development will grow;

3) Instruments to achieve these results are:
   - Implementation of programs to improve the nutrition of pregnant women, breast-feeding mothers and children under 5 (1,14 bln USD);
   - Introduction of dietary standards and guidelines according to the ISO-2000 (257,8 mln USD);
   - Raising public awareness and dissemination of the information on healthy lifestyle and appropriate nutrition.
Findings

• The complex multidimensional approach to food security needs to be implemented;

• There is a need for multi-optional scenarios and estimations;

• Forecasting methods should go beyond the extrapolation, but rather take into account the transformative processes in all spheres;

• Food Security Strategy needs to be integrated into the broader framework of the country development strategy;

• The regional development context is important to develop the National Food Security Strategy.
Thank you!

Resources in English:
http://www.cer.uz
http://transformation.cer.uz/
https://www.facebook.com/CER.Uzbekistan