

Technology Fact Sheet

| Sector | Agriculture | | | | | | | | | | | | | | | | |
|---|---|-----------------------|--|-------------------|-----------------------|-------------------------------------|------|------|------------------------|-----|------|------------------------------|-----|------|--------------|-------------|-------------|
| Adaptation needs | <ol style="list-style-type: none"> 1. Higher adaptability to more frequent droughts 2. Higher adaptation to limited natural resources (water, non renewable sources of energy, soil) 3. Higher adaptation to prices vulnerability for agricultural products and resources in globalized economy | | | | | | | | | | | | | | | | |
| Technology Name | Conventional tillage for sunflowerⁱ | | | | | | | | | | | | | | | | |
| How this technology contributes to adaptation | <p>Moldboard plow for sunflower has some advantages and disadvantages.</p> <p>Among advantages are:</p> <ul style="list-style-type: none"> • Better control of weeds, especially perennial weeds • Better control of pests and descases • Creation of a deeper layer for root growing <p>Among disadvantages are:</p> <ul style="list-style-type: none"> • Higher vulnerability to water and wind erosion • Higher consume of fuel • Negative influence on earth worms etc | | | | | | | | | | | | | | | | |
| Background/Notes. Short description of the technology | Moldboard plow is one the main technological operation for sunflower regarding soil tillage. It requires supplementary soil tillage operation before sowing sunflower | | | | | | | | | | | | | | | | |
| Implementation assumption. | This technology is already used on large scale in Moldova. | | | | | | | | | | | | | | | | |
| Costs per 1 ha | <p>Conventional technology:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;"></th> <th style="width: 15%; text-align: center;"><i>Fuel, l/ha</i></th> <th style="width: 15%; text-align: center;"><i>Salary, lei/ha</i></th> </tr> </thead> <tbody> <tr> <td>1. Moldboard plow (MTZ-80+PLN-3-35)</td> <td style="text-align: center;">25,0</td> <td style="text-align: center;">41,3</td> </tr> <tr> <td>2. Disks, MTZ-80+BDT-3</td> <td style="text-align: center;">6,0</td> <td style="text-align: center;">10,9</td> </tr> <tr> <td>3. Cultivation, MTZ-80+KPG-4</td> <td style="text-align: center;">6,0</td> <td style="text-align: center;">10,9</td> </tr> <tr> <td>TOTAL</td> <td style="text-align: center;">37,0</td> <td style="text-align: center;">63,1</td> </tr> </tbody> </table> | | | <i>Fuel, l/ha</i> | <i>Salary, lei/ha</i> | 1. Moldboard plow (MTZ-80+PLN-3-35) | 25,0 | 41,3 | 2. Disks, MTZ-80+BDT-3 | 6,0 | 10,9 | 3. Cultivation, MTZ-80+KPG-4 | 6,0 | 10,9 | TOTAL | 37,0 | 63,1 |
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| Country social development priorities | <ul style="list-style-type: none"> • Reducing the pauverty • Increasing the employment of people • Increasing the rates of burth and decreasing the mortality of people • Improving the system of health care for people | | | | | | | | | | | | | | | | |
| Country economic priorities – economic benefits | <ul style="list-style-type: none"> • Increasing the sustainability of agricultural sector, including profitability • Reducing the dependence from non renewable sources of energy and their derivates (mineral fertilizers and pesticides) • Creating condition for the development of smal and medium enterprises | | | | | | | | | | | | | | | | |
| Enviromental benefits | Achieving a more sustainable use of natural resources through preventing soil degradation, soil and water pollution, preservation of biodiversity etc | | | | | | | | | | | | | | | | |
| Social benefits | Maintaining soil fertility as the basis for maintaining and increasing productivity for achieving economic stability for the welbeeing of people | | | | | | | | | | | | | | | | |

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| Capital costs for one unit of: | Moldboard plow PR-4 – 82862 lei The required amount for the total area of field crops in Moldova 48571 (the productivity per day is 5 ha. The optimal time for doing such work is 7 days). |
| Operational costs (without maintenance costs) | Use of fuel per 1 ha 31 l x 15 lei = 465 lei |

ⁱ This fact sheet has been extracted from TNA Report - Technology Needs Assessment for climate change adaptation - Republic of Moldova. You can access the complete report from the TNA project website <http://tech-action.org/>