Caragana korshinskii growing in north of the Loess Plateau

# Caragana Korshinskii Planting - a SWC vegetation technology (China)

## DESCRIÇÃO

**SWC decision makers, I.e. approach planners, lead local people to plant caragana korshinskii in the areas of serious water and/or wind erosion by means of combined inputs from government, locals and social loan etc.**

Aims / objectives: The most important factor that hinders agricultural development in the Loess Plateau is soil and water loss. Many measures have been taking to conserve soil and water resources. Here is one of them using caragana korshinskii as one kind of SWC vegetation approach.

Methods: With its long roots, caragana korshinskii can improve soil infiltration and extract water from deep soil layer. It can also protect soil from water and wind erosion because it is tightly fixed in the soil. It has rhizobium in its roots to improve soil fertility. Besides, its branch has economic value. To carry out this approach, planners lead local farmers to plant caragana korshinskii in the areas of the serious water and/or wind erosion. Before planting, dipping selected seeds in brine with 1% concentration, and then moving them in warm water for about 24 hours to make them easier germinating. Caragana korshinskii can be planted in holes. Autumn is the best season for seeding, but if there is much rain in Spring, it is also ok. In the first three years, young plants are very frail. They should be protected from sheep eating and cutting. After four years, the branches of caragana korshinskii above ground can be cut according to their utilization. The more you cut the better they grow.

Role of stakeholders: Besides government leaders, local land users are also the most important participants, they accomplish most of planting and maintaining work. The Research Institute is another key participant, they provide the SWC knowledge and technology.

Other important information: Caragana korshinskii has many other advantages besides ecological benefits. It has many economic values, such as supplying forage for sheep and fuel for local residents, supplying raw material for paper making, supplying green manure and improving soil quality. Finance is mainly from government, partially from loan and local input(labor).

## LOCALIZAÇÃO

**Localização:** Shanxi, China

**Geo-referência de locais selecionados**

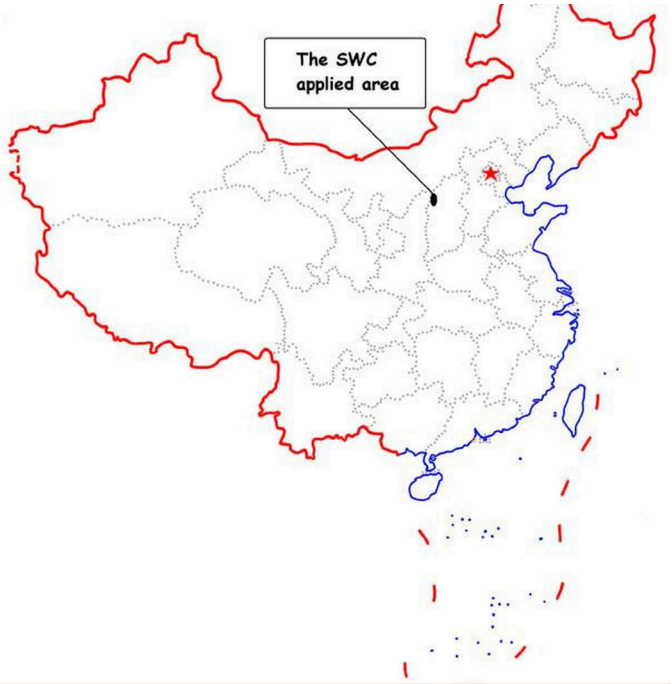
- 113.563, 38.119

**Data de início:** 1960

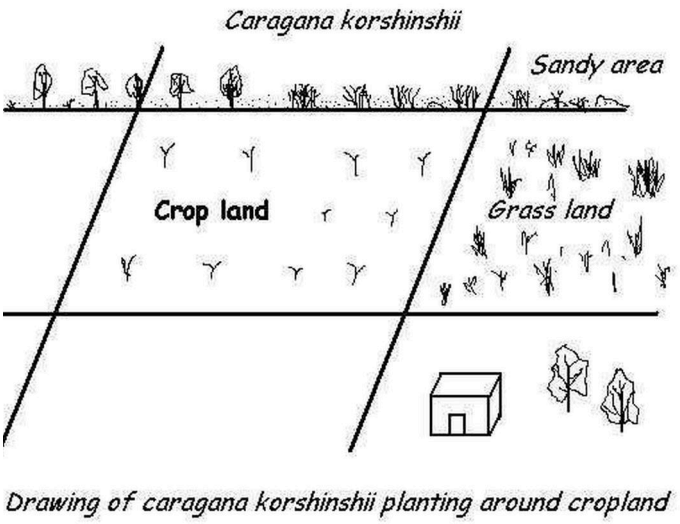
**Ano de término:** n.a.

**Tipo de abordagem**

- [x] Tradicional/Indígena
- [ ] Iniciativa/inovação local recente
- [ ] Baseado em projeto/programa




Area of the caragana korshinskii appication in the Loess Plateau.




Drawing of caragana korshinskii planting in the Loess Plateau.

## OBJETIVOS DE APROXIMAÇÃO E AMBIENTE PROPÍCIO

### Principais metas / objetivos da abordagem

The Approach focused mainly on SLM with other activities (Sheep forage, paper making, fuel, green manure etc.)

Controlling water and/or wind erosion, preventing sand and dust storm.

The SLM Approach addressed the following problems: Water and/or wind erosion, inadequate fodder, poor local agricultural and economic development.

Caragana korshinskii is one of the most drought endurable shrubs. Once planted, caragana korshinskii grows very fast.

### Condições que permitem a implementação da Tecnologia(s) aplicada(s) sob a Abordagem

### Condições que dificultam a implementação da Tecnologia(s) aplicada(s) sob a Abordagem

- **Normas e valores sociais/culturais/religiosos**: People there seldom care about the environment Treatment through the SLM Approach: Education, propagandizing
- **Disponibilidade/acesso a recursos e serviços financeiros**: There is not enough money Treatment through the SLM Approach: National subsidy, loan, collecting money from public
- **Quadro jurídico (posse de terra, direitos de uso da terra e da água)**: Lack of corresponding acts Treatment through the SLM Approach: Enforcing legislation The existing land ownership, land use rights / water rights hindered a little the approach implementation The state has ownership of the land resources, land users can only lease the land for a period of time, they worry about their land would be transferred to others.
- **Conhecimento sobre GST, acesso a suporte técnico**: inadequate Treatment through the SLM Approach: Learn from SWC specialists, introduce into new acquainted person

## PARTICIPAÇÃO E PAPEL DAS PARTES INTERESSADAS ENVOLVIDAS

### Partes interessadas envolvidas na abordagem e seus papéis

| Que partes interessadas/órgãos de implementação estavam envolvidos na abordagem? | Especifique as partes interessadas | Descreva o papel das partes interessadas |
|---|---|---|
| Usuários de terra/comunidades locais | Working land users were work equally divided between men and women (including all the local land users and government politicians) Existing groups of land users | |
| Governo nacional (planejadores, responsáveis pelas decisões) | | |

### Envolvimento do usuários de terra/comunidades locais nas diferentes fases da abordagem

| | Nenhum | Passivo | Apoio externo | Participativo | Automobilização | |
|---|---|---|---|---|---|---|
| Iniciação/motivação | | | | ✓ | | public meetings |
| Planejamento | ✓ | | | | | |
| Implementação | | | | ✓ | | casual labour |
| Monitoramento/avaliação | | | | | ✓ | measurements/observations; |
| Research | | | | | ✓ | measurements/observations; |

### Fluxograma

### Tomada de decisão sobre a seleção da Tecnologia GST

As decisões foram tomadas por

- Somente usuários da terra (iniciativa própria)
- Principalmente usuários da terra, apoiados por especialistas em GST
- todos os atores relevantes, como parte de uma abordagem participativa
- Principalmente especialistas em GST, após consulta com usuários da terra
- Somente especialistas em GST
- ✓ Políticos/líderes

As decisões foram tomadas com base em

- Avaliação de conhecimento bem documentado de GST (tomada de decisão baseada em evidências)
- Resultados de pesquisa
- Experiência pessoal e opiniões (não documentado)

## SUPORTE TÉCNICO, REFORÇO DAS CAPACIDADES E GESTÃO DO CONHECIMENTO

### As seguintes atividades ou serviços têm sido parte da abordagem

- ✓ Reforço das capacidades/ formação
- ✓ Serviço de consultoria
- ✓ Fortalecimento da instituição (desenvolvimento organizacional)
- ✓ Monitoramento e avaliação
- ✓ Pesquisa

### Reforço das capacidades/formação

**Foi fornecido treinamento às seguintes partes interessadas**

- ✓ Usuários de terra
- Equipe de campo/consultores
- ✓ SWC specialists, extensionists/trainers, planners, politicians/decision makers

**Tipo de formação**

- Em exercício
- ✓ Agricultor para agricultor
- ✓ Áreas de demonstração
- Reuniões públicas
- ✓ Cursos

**Assuntos abordados**

seed, establishment and maintenance of Caragana korshinskii

### Serviço de consultoria

**Foi prestado um serviço de consultoria**

- ✓ nas áreas dos usuários da terra
- Em centros permanentes

Visiting demonstration areas; Key elements: Quality of the demonstration, Ability of visitors, Ability of hierophants; 1) Advisory service was carried out through: projects own extension structure and agents, government's existing extension system 2) Advisory service was carried out through: projects own extension structure and agents, government's existing extension system; Extension staff: mainly government employees 3) Target groups for extension: land users, technicians/SWC specialists; Activities: farm visits

Advisory service is quite adequate to ensure the continuation of land conservation activities; Activities of government influence the choice of land users greatly, usually by administration ways.

### Fortalecimento institucional

**As instituições foram fortalecidas / estabelecidas**

- Não
- Sim, pouco
- ✓ Sim, moderadamente
- Sim, significativamente

**no seguinte nível**

- ✓ Local
- Regional
- Nacional

**Descreva instituição, papéis e responsabilidades, membros, etc.**

**Tipo de apoio**

- ✓ Financeiro
- Reforço das capacidades/ formação
- Equipamento

**Mais detalhes**

### Monitoramento e avaliação

bio-physical aspects were regular monitored by 0 through measurements; indicators: None technical aspects were ad hoc monitored by 0 through observations; indicators: None economic / production aspects were regular monitored by 0 through measurements; indicators: None management of Approach aspects were None monitored by 0 through observations; indicators: None There were few changes in the Approach as a result of monitoring and evaluation: planting density, frequency of caragana korshinikii branch cutting.

### Pesquisa

As pesquisas trataram dos seguintes tópicos

- [ ] Sociologia
- [x] Economia/Marketing
- [x] Ecologia
- [ ] Tecnologia

comparing Caragana korshinskii with other kind of SWC vegetation species.

Research was carried out on station

## FINANCIAMENTO E APOIO MATERIAL EXTERNO

### Orçamento anual em USD para o componente GST

- [ ] < 2.000
- [ ] 2.000-10.000
- [ ] 10.000-100.000
- [x] 100.000-1.000.000
- [ ] > 1.000.000

Precise annual budget: n.a.

Approach costs were met by the following donors: government (national - money, technology, planning): 25.0%; national non-government (money): 45.0%; local community / land user(s) (material, money, labor): 30.0%

### Os seguintes serviços ou incentivos foram fornecidos aos usuários de terras

- [x] Apoio financeiro/material concedido aos usuários da terra
- [x] Subsídios para insumos específicos
- [x] Crédito
- [ ] Outros incentivos ou instrumentos

### Apoio financeiro/material concedido aos usuários da terra

| | Parcialmente financiado | Totalmente financiado |
|---|---|---|
| Agrícola: Fertilizantes | | ✓ |
| seedlings and biocides<br>biocides are fully financed | ✓ | |

A mão-de-obra dos usuários da terra foi

- [ ] Voluntário
- [ ] Comida por trabalho
- [x] Pago em dinheiro
- [ ] Recompensado com outras formas de apoio material

### Crédito

Condições: Interest rate charged: 0.7% Interest was lower than market rate.
Fornecedores de crédito: n.a.
Receptores de crédito: n.a.

## ANÁLISE DE IMPACTOS E DECLARAÇÕES FINAIS

### Impactos da abordagem

| | Não | Sim, pouco | Sim, moderadamente | Sim, significativamente |
|---|---|---|---|---|
| A abordagem auxiliou os usuários da terra a implementar e manter as tecnologias de GST?<br>They protect their cropland by applying vegetative measures such as planting caragana koshinskii around the land so that both increasing crop yield and additional income by feeding more sheep etc. | | | ✓ | |
| A abordagem melhorou as questões de posse de terra/diretos do usuário que inibiam a implementação das tecnologias de GST?<br>The approach could very little on it. The problem is likely to be overcome in the near future. By signing land use contract with land ownership. | | ✓ | | |
| Did other land users / projects adopt the Approach?<br>As one kind of vegetation method, it can be used with other approaches, such as check dam. | | | ✓ | |

### Principal motivação dos usuários da terra para implementar a GST

- [x] n.a.

### Atividades de sustentabilidade de abordagem

Os usuários da terra podem sustentar o que foi implementado através da Abordagem (sem apoio externo)?

- [ ] Não
- [x] Sim
- [ ] Incerto

## CONCLUSÕES E EXPERIÊNCIAS ADQUIRIDAS

### Pontos fortes: visão do usuário de terra

- Obtaining additional economic return (How to sustain/ enhance this strength: Developing Stockbreeding and increasing crop yield.)
- low input and easy to implementing (How to sustain/ enhance this strength: Forbidding overgrazing and cutting.)

### Pontos fortes: a visão do/a compilador/a ou de outra pessoa capacitada

- Reducing wind and water erosion (How to sustain/ enhance this strength: Scientific design and management.)
- simple SWC and easy to carry out (How to sustain/ enhance this strength: Enhancing training of how to scientifically planting caragana korshinskii.)
- marked economic benefits that farmers would like to do (How to sustain/ enhance this strength: Further developing the variable uses of caragana korshinskii.)
- Preventing sand and dust storm in the leeward region. (How to sustain/ enhance this strength: Enlarging planting areas and combining with other SWC measures.)

### Pontos fracos/desvantagens/riscos: visão do usuário de terracomo superar

### Pontos fracos/desvantagens/riscos: a visão do/a compilador/a ou de outra pessoa capacitadacomo superar

- no

## REFERÊNCIAS


**Compilador/a**
Jinsheng FU

**Editores**

**Revisor**
David Streiff



**Data da documentação**: 28 de Janeiro de 2009

**Última atualização**: 9 de Julho de 2017



**Pessoas capacitadas**
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**Descrição completa no banco de dados do WOCAT**
https://qcat.wocat.net/pt/wocat/approaches/view/approaches_2395/

**Dados GST vinculados**
Technologies: Caragana Korshinskii Planting a kind of SWC vegetative technology https://qcat.wocat.net/pt/wocat/technologies/view/technologies_1370/
Technologies: Buffer strips and hedges https://qcat.wocat.net/pt/wocat/technologies/view/technologies_6162/
Technologies: Caragana Korshinskii Planting a kind of SWC vegetative technology https://qcat.wocat.net/pt/wocat/technologies/view/technologies_1370/

**A documentação foi facilitada por**

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Projeto
- n.a.

**Referências-chave**


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