An Intervention to Promote Navajo Gardening, Nutrition, and Community Wellness

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LAND GRANT OFFICE OF DINÉ COLLEGE
Backyard Gardening

- Develop garden plot on Navajo Nation to improve access to fresh vegetable and improve the ability to grow food through an intervention designed to promote gardening activities. Diabetes (type 2) is a serious health problem among Navajo people. Diabetes also increases the chances of developing heart diseases and some types of cancer. Fruit and vegetable consumption is linked with a decrease in diabetes and cancer risk. Gardening may increase access to fruits/vegetables, and previous research in four Navajo communities suggests those who garden consume more fruits and vegetables than non-gardeners. Our long term goal is increasing servings of fruits/vegetables consumed. The feature of this intervention is recruit 30 total Navajo families from four selected communities Shiprock, Hogback, Tsaile/Wheatfields and Lukachukai. The selected group will receive technical assistance and resources to implement backyard gardens. The project will evaluate whether (integrated behavioral workshops and individualized technical support) is associated with an increase gardening activities and in behavioral capability to garden.
Participants

• The long term goal of the study is to have more gardens throughout the community, increase behavioral ability to garden, and to maximize the serving size of vegetable and fruit consumption

• Study areas Tsaile/Wheatfields, Lukachukai and Shiprock, Hogback total of 30 participants

• Recruits from Diabetes IHS, WIC Program, Chapter Houses, Community Announcements

• Complete first interview questions related to nutrition and gardening activities; complete intake survey and final interview, participate in garden-based workshops

• Two year intervention gardening study
Two Year Gardening Intervention Study

- Tsaile/Wheatfields = 9 garden sites
  Luckachukai = 6 garden sites with total participants 69 from ages 6 to 61
- Females 0-18 = 21; 19-45 = 17; 46-65 = 6
  Males 0-18 = 12; 19-45 = 11; 46-65 = 2
- Housing Area = 6 and Country Area = 9
  Running Water = 8 and No Running Water = 7
- Gardening - 2 and Non- Gardening - 13
Functions and Responsibilities

Assist with...

- Fencing & Drip Irrigation
- Seeds for gardening participants
- Tilling and soil amendments
- Workshops, Training and All About Gardening
Changes

- Improving healthy lifestyle with communities and allow outreach extension to develop health improvement plans
  - Physical activities with less sitting hours

- Potential plans to lower risk, on the average, of obesity, diabetes, and risk of some cancers
  - Eating more vegetable/fruits per serving

- Start the intervention process of the project
Materials

### Materials List for Raised Garden Bed

#### Drip Irrigation / Soil Amendment

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Quantity</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood stakes 2&quot; x 2&quot; x 12&quot;</td>
<td>$1.99</td>
<td>4</td>
<td>$7.96</td>
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<tr>
<td>Wood Stakes</td>
<td>$3.00</td>
<td>2</td>
<td>$6.00</td>
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<tr>
<td>Wood sides (4 pieces)</td>
<td>$3.25</td>
<td>1</td>
<td>$3.25</td>
</tr>
<tr>
<td>Drip Irrigation Model</td>
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</tbody>
</table>

#### Irrigation System

- 1/2" PVC Tubing 50 ft: $20.83
- 1/2" Drip line with diffuser
- 1/2" Stop Valve:
- 1/2" Compression Tee
- Fertilizer: $3.75
- PVC Regulator: $5.50
- PVC Irrigation Fitting: $3.89
- 1/2" Irrigation Cap: $3.00
- Galfan Reel: $4.99
- Black Reel: $4.99

#### Soil Amendment

- 1 CU FT Perat Moss: $5.97
- 2 CU FT Peat Moss: $6.00

#### Fencing

- 1-1/2" PVC Pipe: $1.00
- 1 CU FT Wood Slats: $2.00
- 2 CU FT Garden Soil: $6.00
- 2 CU FT Perat Moss: $1.00
- 2 CU FT Peat Moss: $1.00

#### Total

- $328.98

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24' x 30' Garden Plot - Floor Plans and Materials

![Diagram of 24' x 30' Garden Plot]
Materials

Most materials Home Depot, Drip Works and Tractor Supplies

Cost material vary on site area
Barriers

- Wildlife
- Soil Site Areas
- Materials
- Meeting with Gardeners
- Measuring Food Intake
- Gardening classes (workshops/conference, etc.)
Gardens In-Progress

- 15 sites completed with all participants planted
- **4 sites** produces yields of 30lbs and other sites showed growth more than 2ft stands with small maturing vegetables
- Garden sites will get two fruit tree next spring
- Fall mulching and cleaning and storing drip lines for fall season with participants
Thank you

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