Before the Spanish conquest, the Inca and the pre-Incan peoples of the Andes developed a unique system of agriculture, as rich as that of any other continent. These five crops are now rarely grown even in the Andean countries that gave birth to them, although arracacha is popular in the northern Andes and Brazil and achira is grown for processing in Asia. Mauka and ahipa have come close to extinction and maca is now grown almost exclusively for processing into nutraceuticals, rather than for food.

**MACA**

*Leptidium meyenii*
- Size and shape of a radish
- Flavor sweet and spicy
- Colors include yellow, red, white and purple
- Long growing season

**ARRACACHA**

*Arracacia xanthorrhiza*
- Large roots like parsnip
- Flavor like carrot & celery
- Few varieties
- Very long growing season

**ACHIRA**

*Canna edulis*
- Rhizomes look like ginger or turmeric
- Flavor bland and starchy
- Several dozen varieties
- Can be high yielding
- Can tolerate warmer climates

**MAUKA**

*Mirabilis expansa*
- Root like a mass of carrots
- Flavor something like a carrot/sweet potato mix
- Few varieties, very rare even in the Andes
- Appears to be easy to grow in many climates

**AHIPA**

*Pachyrhizus ahipa*
- Size and shape of turnip
- Flavor like mix of apple and water chestnut
- Few varieties
- Needs some summer heat to yield well
<table>
<thead>
<tr>
<th>SEASON</th>
<th>CLIMATE</th>
<th>YIELD</th>
<th>SPACING</th>
<th>HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cool summer</td>
<td>Mild/warm year round</td>
<td>1-4 OZ</td>
<td>4 inches</td>
<td>6 inches</td>
</tr>
<tr>
<td>Warm summer</td>
<td>Mild/warm summer</td>
<td>1-6 LB</td>
<td>18 inches</td>
<td>4-6 feet</td>
</tr>
<tr>
<td>8+ months</td>
<td>Warm summer</td>
<td>2-5 LB</td>
<td>24 inches</td>
<td>3 feet</td>
</tr>
<tr>
<td>10+ months</td>
<td>1/2 - 1 LB</td>
<td>12 inches</td>
<td>12 inches</td>
<td>2 feet</td>
</tr>
<tr>
<td>2+ years</td>
<td>Not very hot or very cold</td>
<td>1-8 LB</td>
<td>4+ feet</td>
<td>3 feet</td>
</tr>
</tbody>
</table>

**SUGGESTED USES & NUTRITION**

**MAUKA:**
- Use like carrot, sweet potato, potato, squash
- Stems & roots edible cooked
- Leaves edible raw
- Cooking water tastes good!
- High in protein, calcium, phosphorus, and potassium

**MACA:**
- Use like a radish
- Leaves edible like cress
- High in protein and iron

**ARRACACHA:**
- Use like carrot, parsnip, potato
- Great in soup & stews
- All parts edible, stems & leaves like celery
- High in calcium

**AHIPA:**
- Usually eaten raw as a fruit
- Stems, leaves & pods are not edible
- Low calories
- High in vitamin C and potassium

**ACHIRA**
- Use like potato
- Leaves and shoots used as a green
- High in potassium

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