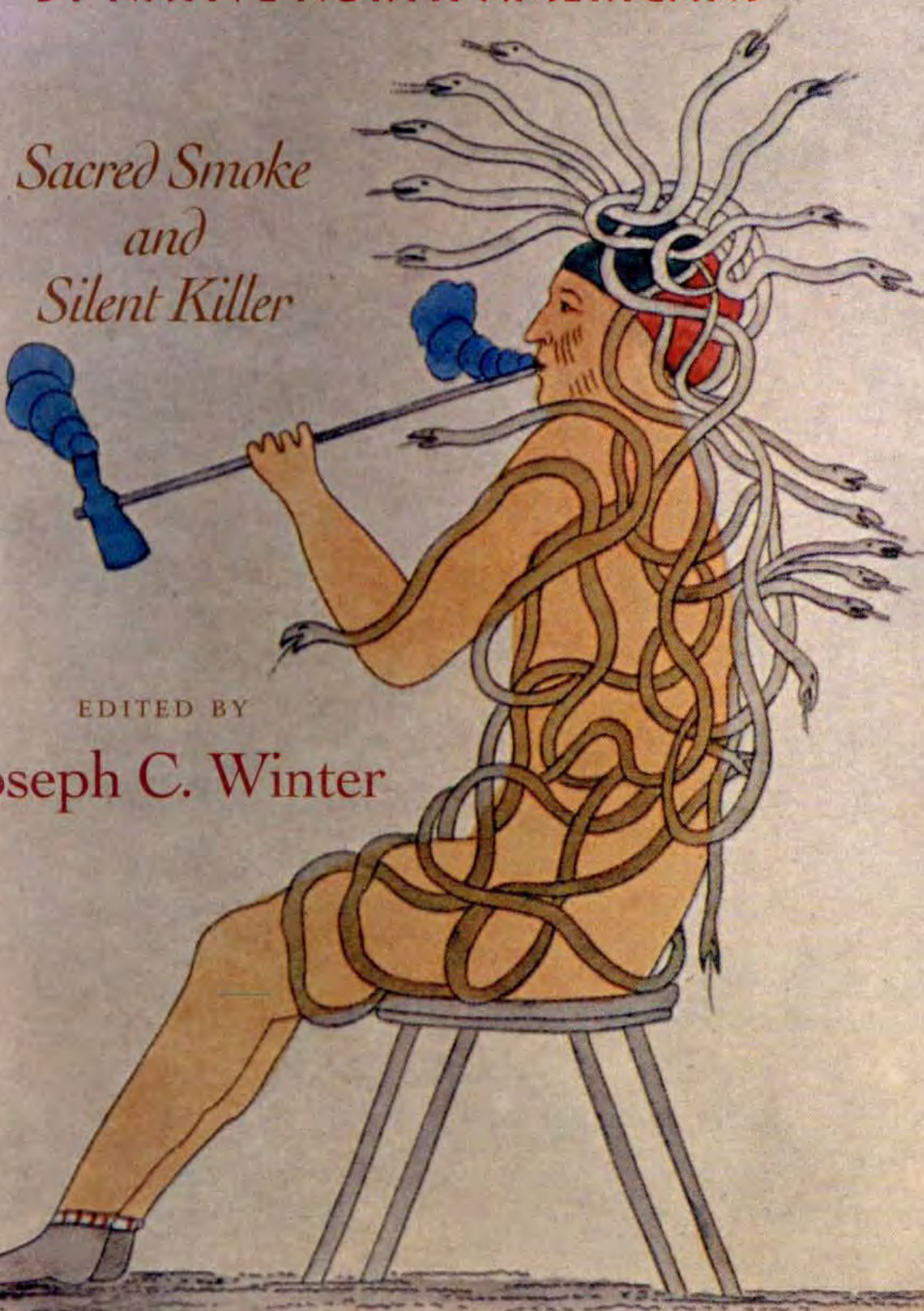


TOBACCO USE
BY NATIVE NORTH AMERICANS

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*Sacred Smoke
and
Silent Killer*



EDITED BY

Joseph C. Winter

WINTER



OKLAHOMA

TOBACCO USE BY NATIVE NORTH AMERICANS

Sacred Smoke and Silent Killer

Recently identified as a killer, tobacco has been the focus of health warnings, lawsuits, and political controversy. Yet many Native Americans continue to view tobacco—when used properly—as a life-affirming and sacramental substance that plays a significant role in Native creation myths and religious ceremonies.

This definitive work presents the origins, history, and contemporary use (and misuse) of tobacco by Native Americans. It describes wild and domesticated tobacco species and how their cultivation and use may have led to the domestication of corn, potatoes, beans, and other food plants. It also analyzes many North American Indian practices and beliefs, including the concept that tobacco is so powerful and sacred that the spirits themselves are addicted to it. The book presents medical data revealing the increasing rates of commercial tobacco use by Native youth and the rising rates of death among Native American elders from lung cancer, heart disease, and other tobacco-related illnesses. Finally, this volume argues for the preservation of traditional tobacco use in a limited, sacramental manner while criticizing the use of commercial tobacco.

(continued on back flap)

Contributors are: Mary J. Adair, Karen R. Adams, Carol B. Brandt, Linda Scott Cummings, Glenna Dean, Patricia Díaz-Romo, Jannifer W. Gish, Julia E. Hammett, Robert F. Hill, Richard G. Holloway, Christina M. Pego, Samuel Salinas Alvarez, Jonathan M. Samet, Lawrence A. Shorty, Glenn W. Solomon, Mollie Toll, Suzanne E. Victoria, Alexander von Gernet, and Gail E. Wagner.

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Joseph C. Winter, who taught for twenty-one years as a Professor of Anthropology at the University of New Mexico, is currently the director of the Native American Plant Cooperative.

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by Native
North Americans*

Sacred Smoke
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EDITED BY

Joseph C. Winter

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The Huichol Indians, Tobacco, and Pesticides

Patricia Díaz-Romo and Samuel Salinas Alvarez

On the basis of an ancient tradition, the Huichol Indians celebrate ceremonies to ask the gods to protect humanity and the planet so that the world may continue to exist. This old tradition—known as *el costumbre* in Spanish—is a set of cultural and community rules that reflects the metaphysical knowledge of this very traditional ethnic group. This chapter describes the paradoxical relationship between the Huichol Indians and tobacco. On the one hand, native tobacco (*makuchi*) is an important part of *el costumbre* and an essential part of their religion. On the other hand, many Huichols have to work as migrant laborers in commercial tobacco fields, where they are surrounded by poisonous pesticides. *El costumbre* uses sacred tobacco to keep the fire of life burning on the planet. Commercial tobacco is destroying this life, for the Huichols are dying within a circle of industrial poison.

The sacred region inhabited by the Huichols is located between the coast of Nayarit and the desert in the central plateau of northwestern Mexico. It is believed that it is there that the energies of “Our Mother the Ocean,” Haramara, and “Our Father the Sun,” Tayau, are concentrated (photo 70). The Huichols know that their life commitment is to understand this territory, work it, bless it, and preserve it.

Many miles away from this region, in the management office of a tobacco company, someone writes a document with the rules for tobacco production. In the chapter about “the reasonable use of pesticides,” the firm underlines: “Anyone



Photo 70. A Huichol family offering tobacco and prayers at Haramara, “Our Mother the Ocean.”

who uses agricultural pesticides is responsible for complying with the regulations set forth by the law and to follow the instructions on the label” (Anonymous 1991:14).

Not far from the sea, on the coastal plain of the state of Nayarit, a Huichol woman drinks water from a bottle that once contained pesticide. She continues with her job, cutting and stringing large tobacco leaves—tobacco poisoned with pesticides. She does not know how to read, nor is she aware that an obscure and ambiguous document exists that would hold her responsible for disobeying a regulation that is totally unknown to her. She cannot read the print on the label and does not know that the little picture of a skull signifies death. She is still there, at the seaside, working, celebrating life. She is

unaware that a circle of poison has surrounded her and her people.

In the middle of this circle the Huichol Indians work. They are being contaminated even as they continue to make vows for life on the planet.

The Huichols and Their Sacred Territory

The Huichol Indians speak a language in the Uto-Aztecan language family, which also includes Nahuatl, Hopi, Shoshone, Comanche, and many other Native American tongues spoken over a vast region stretching from Idaho in the north to central Mexico in the south. The Huichols have survived for thousands of years in Mexico's western mountain range, the Sierra Madre Occidental. During all of this time they have preserved their traditions and followed the rules set forth by *el costumbre*.

Optimistic studies estimate that there are between 15,000 and 20,000 Huichols left in Mexico (AJAGI 1994). Some of us who work in Huichol territory consider that only 7,000 Huichols survive in five principal communities in the Sierra Madre Occidental.

This land was inhabited by the Huichols long before the Spanish conquest in the sixteenth century. Although access to the area is difficult, it was continuously invaded throughout the centuries, most recently by cattlemen and lumber companies. The Huichols' progressive loss of control over the land they inhabit has resulted in the dismantling of much of the communities' social fabric and life-style. For centuries the Huichols depended on a self-sufficient economy based on the production of corn, squash, beans, peppers, and amaranth. Now they are linked to the larger Mexican economy as they breed and sell cattle and work as migrant laborers.

Besides the territory they normally inhabit, the Huichols move throughout the large sacred zone known as Rirrikítá. Five basic sites mark the limits of this area: to the north, Haurramanaka, located in Cerro Gordo in the state of

Durango; to the south, Rapawiyeme, near Lake Chapala in the state of Jalisco; to the east, Pariteke, or Cerro Quemado, and Wirikuta, or the Sacred Desert, both situated in the state of San Luis Potosí; to the west, San Blas, on the coast of Nayarit; and in the center, Te'akata, in Jalisco.

The Huichol deities inhabit each of these sites. Their shamans, or *mara'akames*, communicate with the gods when in deep trance under the effects of peyote (*Lophophora williamsii*), a sacred and powerful hallucinogenic cactus believed to have been used by the Huichols for more than two millenia and known as *hikuri* in Huichol. When in trance, the *mara'akame* becomes the Sacred Deer, or Tamatzi Kauyumarie, who speaks with Our Grandfather Fire, Tatewari. Through Tatewari the sorcerer can communicate with the gods that are incarnate in the sacred sites and pose to them the questions that human beings want to ask them.

In their pilgrimage to Wirikuta, the Sacred Desert, the Huichols purify their hearts by fasting and sexual abstinence. They also carry out public confessions, and they make vows and sacrifices to the gods, following the guidelines set forth by *el costumbre*. When they reach this desert the Huichols find that the tracks left by the Sacred Deer have been transformed into peyote (*hikuri*). As they spear the *hikuri* with their arrows the Huichols are symbolically hunting the Sacred Deer, and by eating the peyote they are taking communion with him.

According to *el costumbre*, the Huichol Indians must travel through their ceremonial territory without any obstacles or difficulties in order to transport their sacred cactus. For a long time, however, this ceremonial land has not been under the control of the Huichol people. They now live in a greatly reduced geographical area, and when they make their pilgrimage, they have to travel over very difficult terrain and are continuously exposed to persecution, mistreatment, and arrest by drug enforcement authorities who charge them with possession of narcotics.

Nicotiana rustica and the Huichols

In their own language, the Huichols refer to traditional tobacco (*Nicotiana rustica*) as *tabaco makuchi* or *ya*. This ethnic group has created many myths and interpretations concerning the origins of the tobacco plant and its role in sacred ceremonies. Indeed, *ya* is an integral part of the search for peyote, the ceremonies associated with it, and its ingestion. According to Carl Lumholtz, tobacco pertains to fire:

The leader, having prayed much, places the ball of tobacco on the ground; touches it with his plumes, and prays aloud. Then he wraps very small portions of it in pieces of corn-husks so that they look like diminutive tamales and hands one such little bundle to each member of the party, who places it in a special tobacco gourd tied to the quiver apart from the other ones. To the Huichols this act symbolizes the birth of the tobacco, and those who have the sacred little parcel have to watch it very carefully and are separated from the rest of the world. (Lumholtz 1902, 2:131)

Two stories about the origin of tobacco have been told by Huichol artists José Benítez and Mariano Valadez. The story told by Valadez was confirmed and detailed by Cheria'akame (don Toño), from the community of Santa Catarina in the state of Jalisco. A similar version is reported by Joseph Winter in chapter 13 of this book.

As shown by the yarn painting in photo 71, José Benítez tells the story of the birth of tobacco with images. He also notes that “this is where Our Elder Brother Tamatzi Kauyumarie created tobacco in a seed bed (the dark area at the bottom center). Kauyumarie (lower right), in front of a prayer bowl containing his thoughts, made his hand become tobacco and his vertebrae become the veins of the leaf” (Negrín 1975:94).

The second story was told by Mariano Valadez (personal communication with Díaz-Romo, 1994):



Photo 71. “Our Elder Brother Kauyumarie Created Tobacco.” Yarn *tabla* by José Benítez Sánchez and Tutukila Carrillo. From Negrín 1975. Courtesy of Juan Negrín.

Our Elder Brother Tamatzi Kauyumarie had made four trips to Wirikuta. Before the fifth pilgrimage he went to the coast. There he found two young girls who invited him to bathe in the sea. When Tamatzi Kauyumarie was in the water the girls hid his bow and arrow. The girls would return them under the condition that Tamatzi Kauyumarie have sex with them.

When he engaged in the act of love one of them asked that he please not ejaculate. Tamatzi Kauyumarie, thus, deposited his semen in his hand and threw it on the beach, near the sea, the sea where Tatei Haramara, Our Mother the Sea, lives. But when he was ready to continue his trip he was accosted by a pack of K'muki, the Wolfmen.

Tamatzi Kauyumarie was able to release himself after a series of vicissitudes and he returned to the site where he made love to the girls. A *makuchi* [tobacco] plant was growing where he had placed his semen.

Tamatzi Kauyumarie noticed that a toad was eating the tobacco leaves. He became very upset because the tobacco he was eating had grown from his semen and his blood. He then cut the toad in half and pulled out the blood clots and buried them. Five days later he returned to the same place and found that a gourd vine called



Figure 29. Tobacco gourd, a necessary adjunct of the Huichol priest.

yaari in the Huichol language had grown. One of the gourds was facing the sun and, like the toad, it had many excrescences on its skin. With this squash he made a tobacco gourd or *ya:kuai* to carry the *makuchi*.

Mariano Valadez explains: "Many people know this story, although everyone tells it differently. I tell it the way it was told to me by my grandmother."

Contemporary ethnographic reports confirm these stories. Indeed, Huichol peyote seekers still use the ceremonial tobacco gourds to carry *makuchi*, which guides and protects them in their pilgrimage to Wirikuta (fig. 29). The use of tobacco gourds was documented by Lumholtz at the beginning of the twentieth century:

And all (*Hikuli*-seekers) carry tobacco gourds, an essential part of the outfit of the *Hikuli*-seeker, who thereby assumes a priestly function. The small, round gourds are raised for the purpose; those with many

natural excrescences being the most highly valued. Each gourd is provided with a string and a stopper, and is worn hanging from the shoulder. A man may have as many as five tobacco gourds rattling against each other as he walks; some of which contain a little tobacco, but most of which are empty. (Lumholtz 1902, 2:127)

According to the brothers Silvano and Jorge Camberos, who work with the Huichols, *makuchi* is an important ethnobotanical resource of the Huichol people and is sacred because it is a representation of Our Grandfather Fire, Tatewari. Occasionally, the Huichols cover the gourds with the skin from a deer scrotum. By uniting tobacco and deer, the object turns into a very powerful item (Camberos and Camberos 1995).

The artist José Benítez (personal communication with Díaz-Romo, 1995) explains how tobacco is a natural complement of corn: "Tobacco arises with corn. Respiration, will, and memory arise with corn. Tobacco arises with the corn leaves." Benítez adds that corn represents food for the body while tobacco represents food for the soul. Proof of this is the Huichol farming practice of cultivating *Nicotiana rustica* plants alongside corn plants (Pacheco 1995).

The Huichols also call the tobacco plant *tabaquito*. Rafael Pateyo López de la Torre, from the Huichol village of Nueva Colonia in the community of Santa Catarina, Jalisco, says that *tabaquito* grows wild on the cliffs during the rainy season, but now every *kawitero* (a medicine man or ceremonial singer) grows his own to be smoked in the ceremonies (personal communication with Díaz-Romo, 1995).

The medicinal use of tobacco has pre-Hispanic origins. In several Aztec codices, tobacco gourds appear as priestly emblems. The Huichol *mar-a'akame* still uses tobacco to heal spells cast by reptiles such as striped snakes and lizards. The healer exhales the smoke rapidly with his hands around his mouth so that it will easily reach the ailing body. The "enchanted" tobacco, prepared by the shamans, must not be smoked. It

must be burned upon returning from the peyote pilgrimage and after the Hikuri Neixa ceremony. Huichols smoke *makuchi* when they are weak. If someone fractures a foot or arm or is bitten by a snake, a *makuchi* leaf is heated and placed on the affected area to relieve the swelling (López de la Torre, personal communication with Díaz-Romo, 1995).

López de la Torre, a Huichol in his forties who is in charge of cultural activities for his people, speaks about *tabaquito* (personal communication with Díaz-Romo, 1995):

The Huichols hang cloth bags containing *tabaquito* on the necks and wrists of newborn babies to protect them, especially against the reptiles that live alongside the streams and that could attack them while their mothers bathe the babies. When the children are five years old it is considered that they are no longer vulnerable. Thus the little bags with *makuchi* can be removed. Then they are burnt so that they can return to Our Grandfather Fire. The children have become strong because they have followed the tradition, throughout a period of five years, in a ceremony referred to as El Tambor (the drum), or as the Corn Ceremony or Feast of the First Fruits.

The protection provided by *makuchi* reaches human beings by unsuspected means. The Huichols condemn the fact that coyotes eat their hens and leave the family without food. Therefore, Huichol Indians hang little bags containing tobacco, similar to the ones carried by babies, on the necks of their dogs. This way they will be protected from the coyotes' power to outsmart the dogs as they care for the hens (Camberos and Camberos 1995:1).

Culturally, tobacco has two functions in Huichol communities, each very different from the other. Although the Huichols have been able to maintain the symbolism and medicinal benefits of traditional tobacco (*Nicotiana rustica*), Western society has degraded this essential plant by converting the closely related *Nicotiana tabacum*

into an industrialized product with highly toxic substances that make it extremely harmful to human health.

Pesticides, Commercial Tobacco, and the Huichols as a Migrant Labor Force

Year after year, thousands of Huichols have to leave their homeland in the dry season to seek low-paying, high-risk jobs in the tobacco plantations of Nayarit. There they live, work, and are exposed to strong doses of deadly pesticides that soak the tobacco leaves. The causes of this migration have to do with the Indians' social and economic situation and their calendar of rituals.

During the rainy season, the Huichols traditionally cultivate crops of corn, chili peppers, beans, squash, and amaranth. This combination is an excellent ecological option, because it preserves the earth's nutrients and provides alternative crops if one or more of the others are attacked by insects. For example, the chili is a natural insecticide plant that protects the other plants from pests. The variety of crops also allows the Huichols a broader and healthier diet.

Unfortunately for the Huichols, Mexico's agricultural ministry promotes just the opposite—the single-crop field. It does this by distributing hybrid corn seeds that require the use of synthetic pesticides and fertilizers, thus replacing the seeds that the Huichols have traditionally used to combine their crops. This condition has gradually caused the people's diet to deteriorate.

Single-crop agricultural fields and other modern developments have also weakened indigenous traditions and increased malnutrition and the consumption of liquor and "junk food" alarmingly. The Huichol Indians are exposed to many other negative factors, including continuous invasions by cattlemen and lumber companies that devastate their pastures and forests, and herbicides that poison their soil and dismantle their system of mutual aid by poisoning



Photo 72. Containers of the herbicides Paraquat (GRAMOXONE) and 2,4-D (Esteron 47M) in a Huichol community. The pipe contains drinking water.

the people. The government's promotion of single-crops fields also promotes the use of agro-chemicals. In particular, the use of herbicides such as Paraquat and 2,4-D gradually destroys the ethic of community labor, endangers the health of the *campesinos* and their families, and damages their land, which is normally on hill-sides and cliffs (photo 72).

Faced with few opportunities to survive in the mountains, the Huichols are forced to migrate seasonally toward the coastal plains of Nayarit, where they work on tobacco plantations that are severely poisoned by agro-chemicals. The Huichols also migrate for cultural reasons, as the activist Juan Negrín noted during an interview in 1993: "They have a religious need to visit the ocean, life's female ancestor, associated with fertility and the earth. At the same time, once they arrive at the coast they find that if

they don't work in the tobacco plantations they will not be able to return to the mountains."

Native tobacco was grown in the state of Nayarit long before the Spanish conquest. During the twentieth century, especially in the 1940s, the commercial tobacco market grew as a result of World War II, leading to the development of tobacco agro-industry in the state. Currently, Nayarit has a population of 825,000, of which 99,000 people live in the municipality (county) of Santiago Ixcuintla. This is Mexico's tobacco capital, with rich, fertile land that also produces tomatoes, beans, peppers, corn, rice, sorghum, bananas, mangos, cantaloupes, and papayas.

Approximately 3,000 Huichol Indians (about 40 percent of their estimated population) work on the plantations cutting and stringing Burley-type, semi-shade *Nicotiana tabacum* leaves, which represent 40 percent of the state's total tobacco production—some 24,000 tons in 1995. Each year, rural landowners gather in the village public squares to await the arrival of the Huichols, so that they can subcontract them as a cheap labor force. The work done by the Huichols is highly appreciated, especially the stringing of tobacco, because it is practically a handicraft.

To reach the tobacco plantations, the Indians have to make a difficult trip from the mountains. They arrive in pickup trucks, packed and treated like cattle after having traveled for hours, sometimes days. They arrive hungry and thirsty. The "valuable shipments" also include pregnant mothers and sick, weakened babies born to malnourished, tubercular women. Elderly men and even "strong" young men arrive in painful conditions.

Negotiations between the Huichols and landowners and *ejidatarios*—acting as middlemen between the labor force and tobacco companies—usually take place in the village squares, bus stations, or sometimes even in the landowner's home. In some cases, the Huichol Indians will timidly ask for "extra conditions" such as a certain number of tortillas per day for the family,

or purified water. Very few, however, are able to obtain these amenities, and those who receive them consider themselves fortunate. The rest are forced to drink water from the Santiago River, one of the most contaminated rivers in Mexico. The irrigation canals and wells in the area are also polluted as a result of the continuous use of pesticides and agro-chemicals that have penetrated the ground.

Many Huichols do not even attempt to negotiate either the "extra conditions" or the fair monetary value of their work. Many do not speak Spanish, and if they do, they are reticent, due to the discrimination against Indians that is rampant throughout Mexico. Most are afraid that they will not be hired if they seem to be "too demanding." Besides, they need the job so desperately that they will end up taking any offer.

When business deals are worked out, they are usually unfair to the Indians. Sometimes, after arguing for hours about prices and working

conditions, the boss leaves abruptly, refuses to hire the Indians, and also denies them the opportunity to be hired by another employer. Then there are bosses who fire the workers after one or two weeks, forcing entire families to migrate again in their painful search for a job. After being hired, the Huichols are transported to the tobacco fields. On many occasions they have to confront the bosses upon arrival in order to guarantee payment for their work once the labor contract has been fulfilled.

All the members of a Huichol family have to work in the cutting and stringing of tobacco leaves, since their work is paid for in bulk (photo 73). A mestizo field worker described the process: "The stringing of 20 tobacco lines takes from six to eight hours. Each line with five tobacco needles is sold for two pesos [present currency (1994) is six pesos to the dollar] and each needle is sold at 40 centavos. Picking the tobacco takes about three hours and is done every day, followed by the eight hours of string-



Photo 73. Huichol woman stringing tobacco leaves in lines (*sartas*). Photo courtesy of José Hernández-Claire.

ing.” The peasant described with admiration the magical hands of the Huichols: “They work better than we do. They do beautiful strings because their hands are graceful and because they do art work. For them this work is simple. Their hands are very agile. They say God gave them that grace” (Díaz-Romo 1994).

One of the reasons the Huichols prefer to be hired in the picking and stringing of tobacco is because this job is done at dawn or dusk, when the temperature is pleasant compared with the extreme heat at noon. The cutting and stringing of tobacco is performed under the shade of the plants’ branches, whereas other farming jobs in the same coastal region, such as the picking of tomatoes, peppers, and beans, take place in direct sun for hours on end.

The apparent advantage of working under shade is actually a health hazard. When the Huichols are picking the wet tobacco leaves, the plants are constantly in contact with their skin, and the Indians are soaked from head to foot. Humid skin easily absorbs pesticides. In addition, the nicotine in tobacco causes skin irritation and allergies, symptoms that, according to U.S. medical reports, are known as green tobacco sickness, or GTS (CDC 1993). According to a study by the Centers for Disease Control, “nearly one in every 100 tobacco harvesters will get sick from the plant, not because they chew or smoke it but because they pick it” (Schwartzkopff 1993:3). Tobacco experts note that the dimensions of GTS have been largely hidden because it often is misdiagnosed. “Harvesters contract GTS when their skin absorbs dissolved nicotine from wet tobacco leaves. Most vulnerable are harvesters who don’t use tobacco—and are therefore less immune to its effects—or those who work without long-sleeved shirts when the crop is wet” (Schwartzkopff 1993:3).

Children who actively participate in the picking chores are particularly susceptible to the hazardous effects of pesticides and nicotine. It is “easier” for them to work on the first phase of the harvest because they pick the

leaves in the lower part of the tobacco plant stem and do not have to bend over. They work along the furrows, picking the leaves and becoming smeared by the gummy, sticky resin that impregnates the tobacco. They also inhale and absorb the residues of toxic pesticides applied to the leaves.

To use the term “living conditions” for their camps is totally inappropriate. The families sleep on blankets or plastic sheets placed underneath the tobacco lines. They try to protect themselves from the sun during the day and from the cold at night, but they are constantly exposed to the toxic substances covering the leaves. Water is unpurified, and there is no drainage or latrines. Even food is cooked under the tobacco lines (photo 74). Instead of burying the plastic bottles that contained pesticides, as they are instructed to do (sometimes in English), the Huichols use them as canteens (see photo 65 in chapter 13). Sometimes they even take them back to their communities as “practical souvenirs” from the coast.

For extra pesos, some Huichol harvesters will continue to work at night. When physical exhaustion hits, they fall asleep alongside the contaminated plants.

The Huichols and Nayarit’s Tobacco Production: Contradictions and Lethal Liaisons

The abuse of *Nicotiana tabacum* is in direct opposition to the ceremonial use of *Nicotiana rustica* by the Huichol people. The *makuchi* carried by the *kawiteros* is an organic, cultural, and religious resource, whereas industrialized tobacco is a dangerous drug impregnated with toxic substances. These include methyl bromide, which destroys the ozone layer and is the most toxic gas produced on the planet. Methyl bromide is used to disinfect the soil. Aldicarb is another extremely toxic chemical sprayed by aircraft over the crops and harvesters during the last stage of tobacco picking.



Photo 74. Huichol family cooking in the tobacco fields. Photo courtesy of José Hernández-Claire.

Pesticide is a generic term that includes insecticides, herbicides, fungicides, rodenticides, nematocides, acaricides, molluscicides, piscicides, and avicides, named according to the pest against which they are active. . . . "Fumigant" is a classification based on physical state (gas). The [United States] Federal Insecticide, Fungicide and Rodenticide Act [FIFRA] defines pesticides as economic poisons. (Moses 1993:916)

Pesticides are poisons designed to kill. They are toxic chemicals that contaminate and degrade anything they touch. Contrary to what pesticide producers say, there are no remedies or cures against the damage they cause. These chemicals are destroying life cycles, as well as the ecosystem of the planet and its inhabitants.

No one in Mexico has taken the necessary measures to protect the health of the workers who handle these substances. This includes national and transnational pesticide firms, tobacco

companies, and Mexico's public health and ecological institutions.

The endemic malnutrition suffered by the Huichol population is further worsened by their increasing rate of alcoholism, and drinking binges occur more often while they live and work on the coast. This aggravates the toxicological problem:

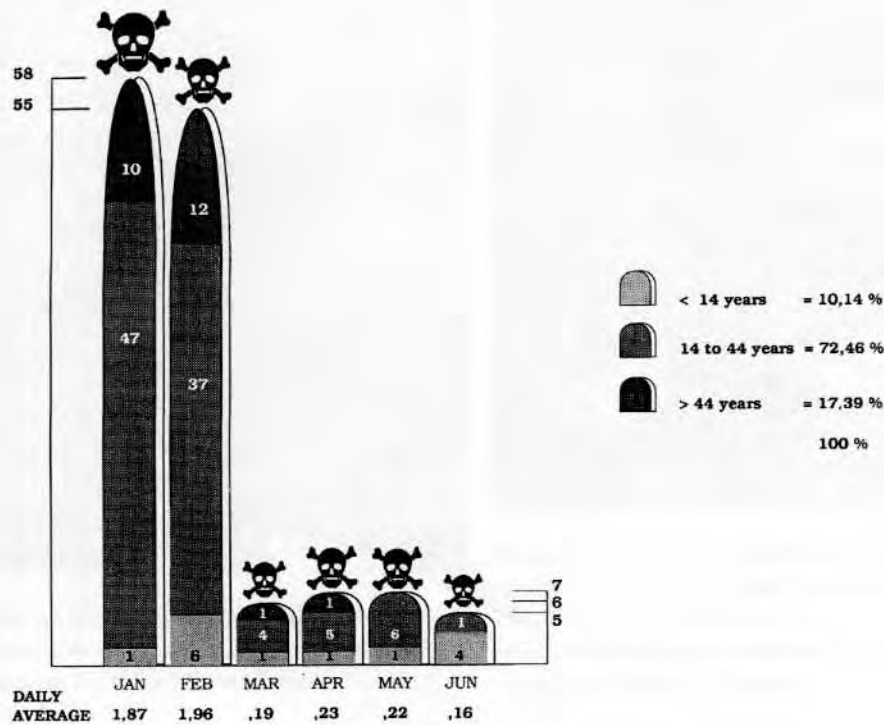
Migrant and seasonal farm workers and their children, who cultivate and harvest crops heavily sprayed with pesticides, are the largest single group exposed. Minorities as a group are most likely to be exposed to pesticides, and yet they have the least control over mitigation of their exposures or over the proper assessment and treatment of potential health problems arising from the exposures. (Moses 1993:914-915)

Table 58 lists the pesticides used in the tobacco fields. Based on available medical records, figure 30 shows the number of Huichols treated for acute pesticide intoxication during the first six months of 1995. When migrant harvesters are

Table 58: Pesticides Used in Mexican Tobacco Fields

Common Name in Mexico	Commercial Name in Mexico	Manufacturer
2,4-D	Esteron 47M, DMA 6m	DOW Elanco, Mexicana
Aldicarb	COBOX, Temik 150	Ortho Basf, Rhone-Poulenc
Azinfos metilico	Gusathion-Guthion, Gus-Action	Bayer, Helios SA de CV
Bladafume	Sulfotep, BLADAFUM	Bayer
Bromuro de metilo	Bromuro de Metilo	VITESA-FAX
Carbarilom	SEVIN 80 PH, SEVIN 5G	Rhone-Poulenc
Clordano	CLORDANO, CLORDANO Técnico	Anajalsa, Velsimex SA de CV
Clorpirifos	Lorsban 480 EM	DOW Elanco
Deltametrina	Decis, K-OBIOLCE	HELIOS SA de CV, Roussel UCLAF
Diazinon	DIAZINON 25 E	Anajalsa-CIBA, Drexel
Isotiosianato de metilo	VORLEX	NOR-AM
Metamidofos	TAMARON or Tamaron 600	Bayer, Du Pont
Metidation	SUPRACID 40-E PM	Ciba Geigy
Metomilo	LANNATE 90-LV, Nudrin 90	Du Pont, Shell
Monocrotofos	NUVACRON 690, Azodrin 5	Ciba Geigy, Shell
Omethoato	Folimar-Folimat	Bayer
Oxamil	VIDATEL	Du Pont
Paratión etílico	Folidol, Parathion Etilico	Bayer, ChemiNova-Dinamarca
Paration metilico	THIODAN	Hoteh
Piridazinonas	ROYAL MH 30	UniRoyal Chemical
Pirimicarb	Pirimor-Pirimicarb	ICI

Note: In all cases, the medium of lethal dosage is oral.



Patricia Diaz-Romo, 1995

Figure 30. Pesticide- and tobacco-intoxicated Huichols in the first six months of 1995, Santiago Ixcuintla, Nayarit, Mexico.

affected by acute intoxication, they are sometimes taken to rural clinics or to the emergency wards at hospitals in nearby towns. In most cases, however, they receive negligent or unfair medical treatment. Rural hospitals often refuse to treat them, arguing that they do not have a "pass"—a proof that they have officially ensured social security benefits. If they are treated, there is often a lack of adequate medicine or antidotes, or they are attended by unqualified medical personnel. "Lack of access to and unavailability of adequate health care contribute significantly to the impact of environmental contamination, and constitute a major problem for farm workers who live in rural areas" (Moses 1993:915).

The World Health Organization reports that around 3 million people are poisoned by pesticides every year. Approximately 20,000 die. Ninety-nine percent of those deaths occur in Mexico and other Third World countries.

The Huichol shamans do not know any chants or rituals to counteract the illnesses that are caused by these chemical substances. It is a paradox and crime that, although the Huichol people have spent thousands of years keeping their ritual candles burning to preserve life on the planet, a circle of industrial poison has been closing in on them for the last 50 years. If nothing is done about it, tobacco will no longer be the food of their gods, since their gods and people will no longer exist.

Notes

This chapter was prepared with the cooperation of Ramón Salaberría and was translated by Kim Lopez. We thank them both.



On the front and above: Painting by Captain Seth Eastman,
from Henry Schoolcraft, *Information Respecting the History,
Condition, and Prospects of the Indian Tribes of the United States*
(1853), after an original Iroquois drawing.

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