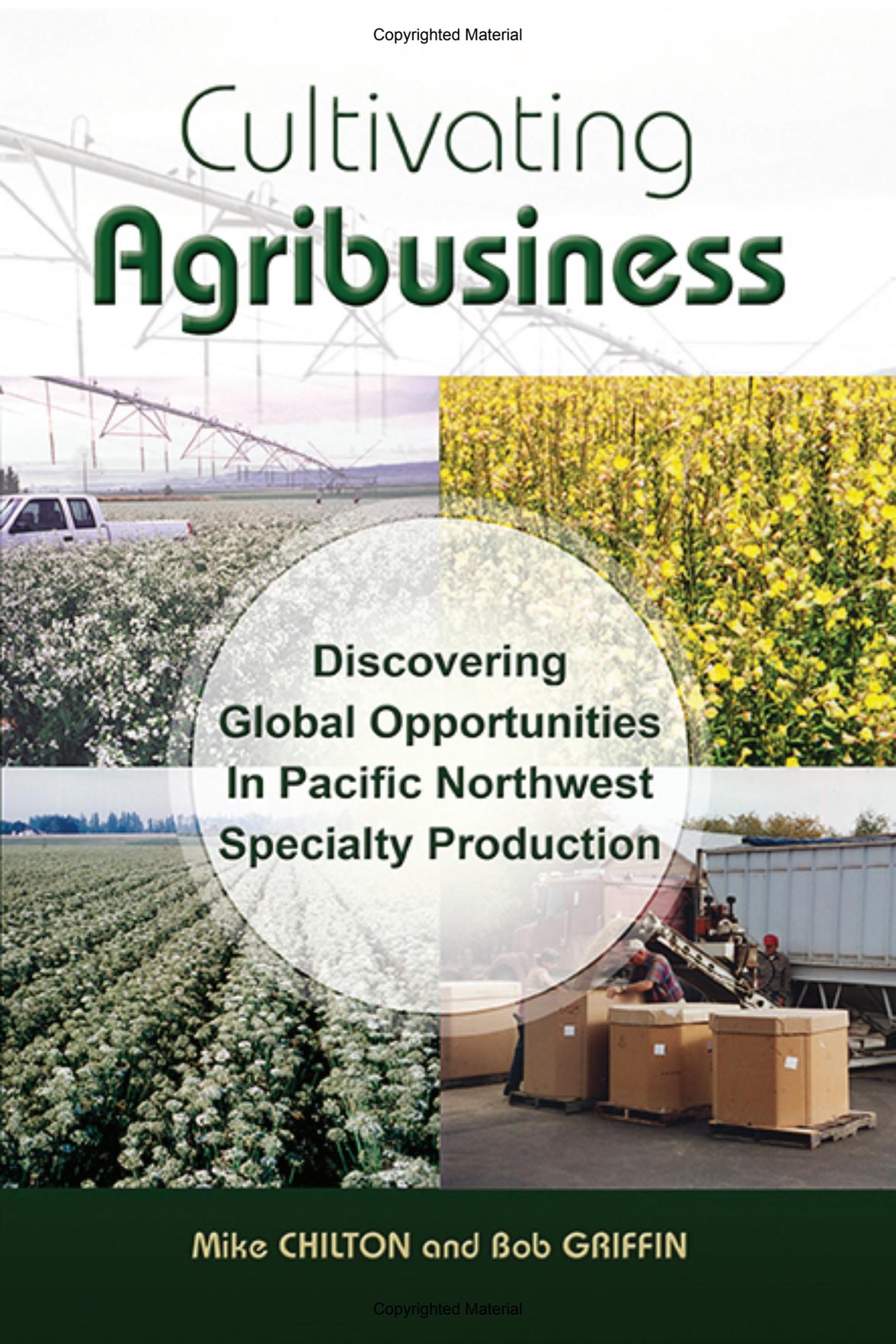


Cultivating **Agribusiness**



**Discovering
Global Opportunities
In Pacific Northwest
Specialty Production**

Mike CHILTON and Bob GRIFFIN

CULTIVATING
Agribusiness

DISCOVERING GLOBAL OPPORTUNITIES
IN PACIFIC NORTHWEST SPECIALTY PRODUCTION

MIKE CHILTON AND BOB GRIFFIN



PORTLAND, OREGON

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This book is dedicated to all individuals and businesses creating a future in the use of current and new specialty seeds and crops supporting sustainable and economic livelihoods.

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PREFACE

This book intends to give credence to a personal vision for new and expanded agricultural productivity and technology for the Pacific Northwest. My vision foresees utilizing the existing natural and human resources of the Pacific Northwest as an expanded area of research, production, processing and marketing for specialty crops, especially those suited for cooler growing season environments. This enhanced capacity would serve the rest of the country and the world. This capacity could support a wide range of crops developed for proprietary end-use purposes, including: aromatic and special use oils, fibers, natural and pharmacological medicinals, plants used in arts and crafts sector, and the already significantly diverse and growing nursery, seed and food crops sectors.

There are a number of factors that encourage me to believe that this vision can be realized:

1. the inherent richness of agricultural production capacity in the Pacific Northwest;
2. the generally benign climatic conditions for both biennial and annual crops;
3. the availability of diverse choices of elevation and soil types to suit the needs of specific crops;
4. diverse climatic zones on the east and west sides of Cascade mountains;
5. relatively small owner-operated farms;
6. short distances to major hubs for both domestic and international transportation, and
7. educational institutions which have the capacity to become intellectual repositories for specialty crop production, processing and marketing.

I would hope this account of my agricultural endeavors will motivate potential entrepreneurs and existing agribusinesses to consider the opportunities that are available for the production of seed and specialty crops within the region.

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I would also hope that my business experience will contribute case study material for courses in business and/or agriculture in tertiary and secondary education institutions in the Pacific Northwest.

Finally, I would like to reach farmers, extension agents and agribusiness firms with practical technical advice based on what I have learned in the course of years of field experience with farmers and various specialty crops.

The story we tell here did not follow in a straight line, but rather, it follows the circuitous route of my personal history evolving from deep and tangled roots. These include:

1. my youth as a farm boy on a small mid-western farm;
2. university training with a specialization in systematic and economic botany;
3. an extended stay in Southeast Asia working in agricultural development and related fields;
4. working for extended periods with people with widely varying cultural backgrounds, and reaching agreements in cross-cultural situations;
5. the reverse culture shock of returning to the United States after a long absence;
6. the long, meandering search for a new career;
7. and finally, the fortunate discovery of opportunities in Pacific Northwest agriculture.

Along the way, there were many anxious periods, but there were many periods of great pleasure as well that buoyed the spirit and created wonderful memories. My wish is to share some of my personal recollections in hopes that you will find them useful as you put together your future plans.

Mike Chilton
Turner, OR
September 2015

CO-AUTHOR PREFACE

I first met Mike Chilton in Pakse, Laos, in 1966. Mike was visiting a close friend from IVS days in Vietnam who had generously offered me a room in his house shortly after I arrived there. I was beginning a new job as regional manager for southern Laos of the USAID-funded Agricultural Development Organization. Mike had five years of IVS experience with Vietnamese agriculture under his belt and was beginning a new assignment in Thailand. I was just beginning my career in international development.

Over the next nearly five decades, we developed a strong friendship with shared interests in small farm agricultural development, Southeast Asia and entrepreneurship. (We also shared an affinity for the no-nonsense inventor, Bill Lear, creator of the Lear Jet and the 8-track audiotape.)

Mike and I began our working lives with direct exposure to the circumstances of subsistence farmers in Vietnam and Laos respectively. In the background of our experience was the Vietnam war.

Over the years we kept in touch by mail and often visited each other in places like Bangkok, Udorn and Songkhla in Thailand and Saigon in South Vietnam. (After Mike married Simone, a dinner invitation to their home was always favorably received.)

By the time the war ended, I had landed a consulting job on a UN regional project dealing with agricultural development. For Mike, the end of the war meant not only that Vietnam was no longer a place he could live but also that the thousands of jobs related to wartime development projects had simply evaporated. Furthermore, his dreams of agricultural production and marketing in Vietnam had vanished. After he returned to the family-owned acreage east of Springfield, Oregon, Mike ultimately looked at private sector jobs in the U.S. The main thrust of the book describes his adventures in Pacific Northwest agriculture.

When my eldest daughter moved to Oregon and opened a business with her husband, my wife and I had a new reason to visit the state and renew our friendship with the Chiltons in person. I had completed an MBA in the late 1970s. Though I never went into corporate employment, the course work engendered a lifelong interest in business news. Mike's business success

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stood out as it went so much against the grain. When Japan was no longer The Land of the Rising Sun, but in the words of an *Economist* cover story, “The Risen Sun”, the U.S. was flooded with Japanese exports and seemed to be on a losing track in the battle for global economic supremacy. Japan was then in the 70s and 80s, as China seems to be today, the new colossus, destined to rule the world. Mike, nevertheless, had succeeded in producing a product that the Japanese were all too eager to import, daikon radish seed. His business’ balance of payments was massively lop-sided for the USA. His story seemed made for packaging as a business school case study.

After Mike sold his business, we chatted off and on about documenting his business success. We came to realize that the business story was inextricably linked with his life story and really couldn’t be told on its own. So what we have written here is really Mike’s biography, a tale with many strands, many what ifs, many false starts and dead ends, but ultimately a successful coming together of experience and initiative that made for a significant one-man agribusiness success.

Bob Griffin
Honolulu, HI
September 2015

ONE

GETTING STARTED IN OREGON AGRICULTURE

*I*n his book, *Outliers*, Malcolm Gladwell debunks the idea that geniuses are born as fully competent masterminds. In making his case for nurture over nature, he points to prominent innovators who made their biggest breakthroughs after long apprenticeships: Bill Gates spent weeks and months writing software programs in high school and college as part-time jobs and hobbies; Tiger Woods had a golf club in his hands from age three; and the Beatles' played 1,200 performances in Hamburg, Germany, prior to their emergence as Britain's greatest rock group.

On the basis of these examples, Gladwell formulates “the 10,000 hour rule” or the minimum investment of practical work experience required for a person to potentially produce extraordinary results in his or her chosen field.

While not everyone who does extensive on-the-job training will achieve remarkable results, it is practice, not genetic endowment, that is essential to “make perfect”, at least according to Malcolm Gladwell.

My introduction to Oregon agriculture began in the mid-1970s. I had been working in Vietnam and Thailand for the previous fifteen years,

initially as a volunteer with International Voluntary Services and later in both private and public sector positions. Most of these assignments had some kind of connection to agriculture and rural development. When the Vietnam War came to an end in April 1975, my employment opportunities evaporated. In July, my wife Simone, son Paul and I left Southeast Asia for San Francisco. The Government offered me a sixty-day temporary duty assignment in Portland, Oregon with the Army Corps of Engineers. The short-term job was supposed to be my transition to new employment. I did the sixty days with the Corps writing what was probably the first generation of environmental impact statements for their projects.

That assignment could have led to more work but we chose to move to a farm in Springfield, Oregon, that we had bought with my family a few years earlier. I was looking for a job, any job, and still at loose ends. It is difficult to express how one feels in such moments. I felt like a refugee in my own country. I needed some time to figure out what I wanted to do and what opportunities were available. One thing that I did know was that I had become disillusioned with the idea of working for the government. Eventually, the private sector would beckon.

GRAPES, BEER AND SNEAKERS

The emerging opportunities in the Oregon economy in the late 1970s and early 1980s were not obvious to me at the time. Chris Klemm, former director of the Oregon State University (OSU) program on entrepreneurship, reminded me of the ways that the Oregon economy was evolving in the years after I took up residence here.

While grapes had been grown for wine since the middle of the 19th century in Oregon, the modern era of viticulture began in the 1960s with new plantings by wine entrepreneurs who brought expertise and experience from the University of California, Davis, and from France. By 1981, an OSU survey found over ninety wine grape growers with a total of over 1200 acres in grapes, much of which was not yet bearing fruit. Two-thirds of that acreage was in grapes for Pinot Noir, Riesling and Chardonnay wines. Thirty years later, vineyards had expanded to over twenty thousand acres, of which over twelve thousand acres were in Pinot Noir grapes. Over fifteen

varieties of wine grapes were being produced. The 2011 crop was 41,500 tons worth nearly \$2,000 per ton.

As is the case with wine, Oregon has been producing beer since the mid-19th century. Henry Weinhard founded perhaps the most famous Oregon Brewery in 1852. Prohibition put the brakes on the production of all alcoholic beverages in the 1920s and 1930s. Though historical statistics on beer production are hard to come by, beer production slowly expanded over the decades until the state legislature approved the establishment of brew pubs in 1985. This act kicked off a large expansion of craft breweries. According to the Oregon Craft Beer website, Oregon now has 172 breweries that operate 213 brewing facilities with a total of 6,500 employees. Portland has fifty-five breweries and is known in some quarters as the micro-brewery capital of the world. Statewide, production of beer reached 1.4 million barrels of which Oregon residents consumed more than a third.

As beer production has expanded, so has the demand for hops. In the 1930s, Oregon was the largest hops-growing state in the country. There is still significant production in Oregon—over 5,500 acres in 2014—but the large majority of national hops production is in Washington state which currently has 29,000 acres planted. Growing hops is labor intensive, uses specialized technologies, and has relatively high start-up costs. These factors may explain why Oregon hops growers are mainly third or fourth generation farmers.

The third area of the Oregon economy that was taking off was not just sneakers, but the whole gamut of athletic shoes and sports apparel. Nike had started in the 1960s with Phil Knight selling Japanese-made shoes out of the trunk of his car at track meets. Along with University of Oregon track coach Bill Bowerman, they founded Blue Ribbon Sports (BRS) with the intention of building better running shoes. BRS became Nike in 1972 as the firm shifted from distribution of other manufacturers' shoes to the design and production of their own products. A Portland State University graphic arts student created the famous “swoosh”.

By 1976, Nike had \$14.1 million in annual sales. Five years later, in 1981, that number was \$457.7 million. In the same period, earnings per share of the company's stock had risen from \$.04 to \$1.57. During the past

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three decades, the firm has created full lines of shoes and athletic apparel and expanded distribution around the globe. Sales in its fiscal year 2014 topped \$27 billion. Roughly six thousand people are employed at its twenty-two-acre headquarters campus in Beaverton.

The knock-on effects of Nike's success are vital for the state's economy. Columbia Sportswear has its headquarters in Portland and Nike's main international competitor, Adidas, has its American headquarters there as well. Oregon has been discovered as a perfect place for outdoor gear firms. According to Will Blount, the President of Ruffwear, "Oregon is the ideal place to build, test and photograph outdoor products. Where else can you find snow, desert, mountains, forest, rivers, lakes and oceans all within a few hours of travel?"

In the pre-Internet age of the 1970s, I was aware of none of these promising avenues of economic development in the state. However, living on the farm in Springfield, in the middle of Oregon's most prolific agricultural region, re-kindled my interest in agriculture.

LEARNING OREGON AGRIBUSINESS

My desire to return to some kind of productive work was unrequited for many months. Finally, in January 1977, my 10,000-hour internship on the road to entrepreneurial agribusiness success really began. I was offered a job with a small, Salem-based firm called Agricultural Services (Ag Services). The company contracted local farmers to grow grass seed and sold them fertilizer blended for their soil conditions, along with other agricultural chemicals. My bosses at Ag Services, John Rutkai and Dave Amoth, each owned a quarter of the company. Van Der Have, a large Dutch seed breeder who purchased all of Ag Services' grass seed production, owned the other 50%. Despite its low profit margins, Dave and John focused their energies on the fertilizer blending operation. In the late 1970s, the firm's annual turnover was in the neighborhood of \$6 to \$7 million including both grass seed sales and the revenue from the fertilizer and chemicals segments of the business. The firm also had a very small vegetable seed business that wasn't attracting much attention from management. Much to everyone's surprise, this sideline took on great importance in the years to come.

When I began at Ag Services, John and Dave didn't quite know what to

do with me. I swept the warehouse floors, trapped gophers and did some library research at Oregon State. After a few months with Ag Services, John asked me if I would like to take charge of the vegetable seed business. Over time, in what I look back on as my Gladwellian apprenticeship, I was to learn the ins and outs of contract seed farming, the value our international partner brought to the business, and the need for healthy margins in the often unpredictable seed business. I was on a path that would eventually lead me to the point where I would start up my own agribusiness.

Seed production is a staple of agriculture in the Pacific Northwest. East of the Cascade Mountains, high desert prevails. In the valleys of western Oregon and Washington, the climate is Mediterranean with mild, rainy winters and warm, dry summers. The soils are good, agriculture is diversified, and farmers are willing to try new crops and adapt their farming procedures as required. These conditions are highly favorable for vegetable seed production. The specific growing conditions in the fertile Willamette Valley are described in more detail in a pamphlet developed by the Willamette Valley Specialty Seed Association in cooperation with the Oregon State University Extension Service (see **Appendix One**). In addition to great growing conditions, the expansion of the Port of Portland and other transportation infrastructures in the area facilitate getting seeds to markets.

The vegetable seed industry, which became my specialty, started in the Pacific Northwest towards the end of the 19th century when a farmer named Alvinza Tillinghast successfully produced a crop of cabbage seed in Skagit County, Washington. Vegetable seed production expanded slowly over the following decades until the world wars, when the U.S. was cut off from European seed supplies. By the time of World War II, European seed production was in disarray. In response to the disruption of the industry, local and foreign seed companies set up operations in the Pacific Northwest. These businesses expanded rapidly to meet wartime demand, initially for cabbage, carrot, and sugar beet seed. By the 1970s, these seed operations had become permanent bases for American and European seed companies.

When I took over responsibility for Ag Services' vegetable seed contracting and sales, vegetable seed production was a small sideline for the firm and not a significant contributor to its bottom line. Despite the

apparent insignificance of the seed operation, I was eager to take up this opportunity and actually had a good deal of relevant experience for the job. I knew something about seed production from my studies at Iowa State University. I had crop experience from earlier work experience in Vietnam. My grasp of plant taxonomy—the relationships among plants and their environment—was particularly important.

*Start where you are.
Use what you have.
Do what you can.*

Arthur Ashe

For example, knowledge of the pests and diseases of cabbage told me that radishes, which are taxonomically related, would likely suffer from the same production problems. Similarly, I had a firm grounding in plant physiology, the science of how plants

grow. Thus, I knew that different crops reacted differently to temperature and hours of daylight. My knowledge of the market was also growing. I had learned that seed companies liked to diversify their sources of supply geographically in order to protect against a crop failure in any given region. Finally, I knew that Asia was a growing market for almost everything, and I was looking for a way to make use of my familiarity with the Far East.

THE DAIKON RADISH SEED BOOM

In 1978, I convinced my bosses at Ag Services to fund a business development trip to Asia to promote our capacity to grow vegetable seed. John and Dave had strong backgrounds in agricultural technology, but despite their partnership with Van Der Have, their international experience was limited. John and I spent three weeks visiting Japan, Korea, Taiwan, Hong Kong and Thailand. I used the services of Agricultural Attachés at U.S. embassies in these countries to identify local seed companies and make appointments for us. After three weeks, we came back to Oregon with two five-acre orders for two different varieties of daikon radish seed. The customer was Takayama Seed Company of Kyoto, Japan.



Daikon Radish

Daikon radish is a long white root crop familiar to patrons of Japanese restaurants as the shredded garnish served with sashimi and in soups. Takayama Seed had a growing domestic demand for radish seed and was willing to try us as a new seed supplier. The Japanese firm was unable to find tracts of land large enough for radish seed production in Japan as typical land holdings there were quite small. Mr. Ono of Takayama gave us a contract, probably knowing full well that we had never grown daikon seed before.

Blissful in our ignorance of the vagaries of daikon seed production and the related seed quality requirements, we plunged ahead. The business model was simple and already commonly understood by grass seed growers in Oregon. In order to be able to contract for a grower's seed production, our first priority was to identify and secure a market for that production. In the case of daikon seed, we had found a small market. Our Japanese buyer agreed to buy as much seed as we could produce on pre-agreed acreage for X\$ per pound. Next we had to find growers who would agree to grow a certain number of acres of daikon seed that we would buy for Y\$ per pound, a price that would give us a comfortable profit.

The agreement included standards on germination rates and purity for the grower's seed. X minus Y would be our profit margin, which we locked in by means of a grower's contract on the production side and a buyer's contract on the marketing side. To make this business model work, we had to find growers who were willing to produce for Y dollars per pound and who could meet our buyers' specs for germination and purity.

The business model sounded simple enough, but we immediately encountered difficulties. The first seed production problem was a lack of interest from farmers. Eventually, we found Dave Fuller, a farmer who thought we offered a good deal and was willing to take a risk with a new crop. We contracted Dave for five acres of seed. He became our first and only contractor in our initial growing season. Secondly, we found that growing was easy: daikon grew very quickly. But harvesting proved to be difficult, really difficult. The trick was to get the daikon seed out of its pods without damaging it. Traditional harvesters destroyed much of the seed or failed to break it out of the pods. To deal with unopened pods, we tried running them back through a burr mill by hand with limited success. Nevertheless, despite the harvesting problems and some contamination from

wild radish that grew naturally in Dave's fields, demand in Japan was such that Takayama took all the seed that we could deliver. However, due to the additional threshing expenses, we only broke even in our first year.

The second growing season came around quickly. The news had spread by word of mouth in Japan that there was a new source for daikon seed in Oregon and we had some Japanese visitors. Though we added only one new Japanese customer in 1979, we had seventy-five acres of daikon seed in our order book—fifteen times what we had in the ground in 1978.

Again in the 1979 season, harvesting was our biggest concern. We tinkered with harvesting equipment, adding rubber padding and rollers to cushion the threshing process. Ultimately, we contracted a friend with an engineering background, Hank Warkentin, to fabricate the first set of rollers and pads. The padding and rollers greatly improved our seed quality. These modifications were particularly helpful if the crop had a high moisture content. Over the next few years we had Hank make twenty more sets of rollers. We rented them to our contract farmers and required their use for harvesting as a condition of our grower contracts.

While we were struggling with traditional combines, International Harvester began to introduce a rotary combine in our area. The new rotary combines threshed daikon seed more gently and efficiently than older harvesters, eventually becoming the main choice of local seed growers for their harvesting needs. When the new harvesters were introduced, their owners didn't have enough work for the machines and were happy to do contract harvesting on our daikon fields. In any event, the rotary combines didn't need rubber rollers. Our tinkering with the old harvesters had solved our harvesting problems for a couple of seasons, but the introduction of rotary combines provided the long-term solution.

The trajectory of our daikon seed production over the next few years was almost vertical as can be seen from the following table:

Business/Agriculture

Cultivating **Agribusiness** Mike Chilton and Bob Griffin

Cultivating Agribusiness is Mike Chilton's personal story of engaging small business potential in specialty agriculture products—an area in which he includes seeds, plant-sourced oils, and plant-material products. His success in the Pacific Northwest, along with his desire to share and help others engage successful opportunities in agriculture, makes this book a valuable resource for farmers, extension agents, future farmers, agriculture and ecology educators, and agribusiness entrepreneurs. This is more than a 'how-I-did-it book'. It is an invitation to a wonderful life in agribusiness.

- All agriculture involves the business of using plants. Learn about the ongoing global need for quality horticultural seeds. Risks and rewards are detailed. Many specifics for Pacific Northwest agriculture are included.
- Learn quality assurance requirements and procedures for successfully fulfilling contracts with both growers and buyers. Sample agreements are provided.
- Lower business risks by thinking 'contracts first' and then production.
- Understand production and marketing principles useable in a near limitless number of specialty products derived from the earth but contributing to a "lighter footprint" economics and a stronger quality of life.

The delicate, intricate, invaluable goal of protecting the health of our planet is as much about the plants that share our biosphere and provide our sustenance as it is about the well-being of people. Mike Chilton and Bob Griffin have given us a rare insight into how the business of plants can be done with deep commitment to a light footprint.

—David J. Schleich, PhD
President, National College of Natural Medicine

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